DOCUMENT RESUME

ED 459 647 HE 034 536

TITLE	Higher Expectations: Essays on the Future of Postsecondary Education.
INSTITUTION	National Governors' Association, Washington, DC. Center for Best Practices.
PUB DATE	2001-00-00
NOTE	60p.
AVAILABLE FROM	National Governors Association Center for Best Practices, 444 North Capitol Street, Suite 267, Washington, DC 20001. Tel: 202-624-5300; Web site: http://www.nga.org/center.
PUB TYPE	Collected Works - General (020)
EDRS PRICE	EDRS Price MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	Demography; Economic Factors; *Educational Policy; Educational Technology; *Futures (of Society); *Higher Education; *Privatization; *State Programs; *Student Evaluation

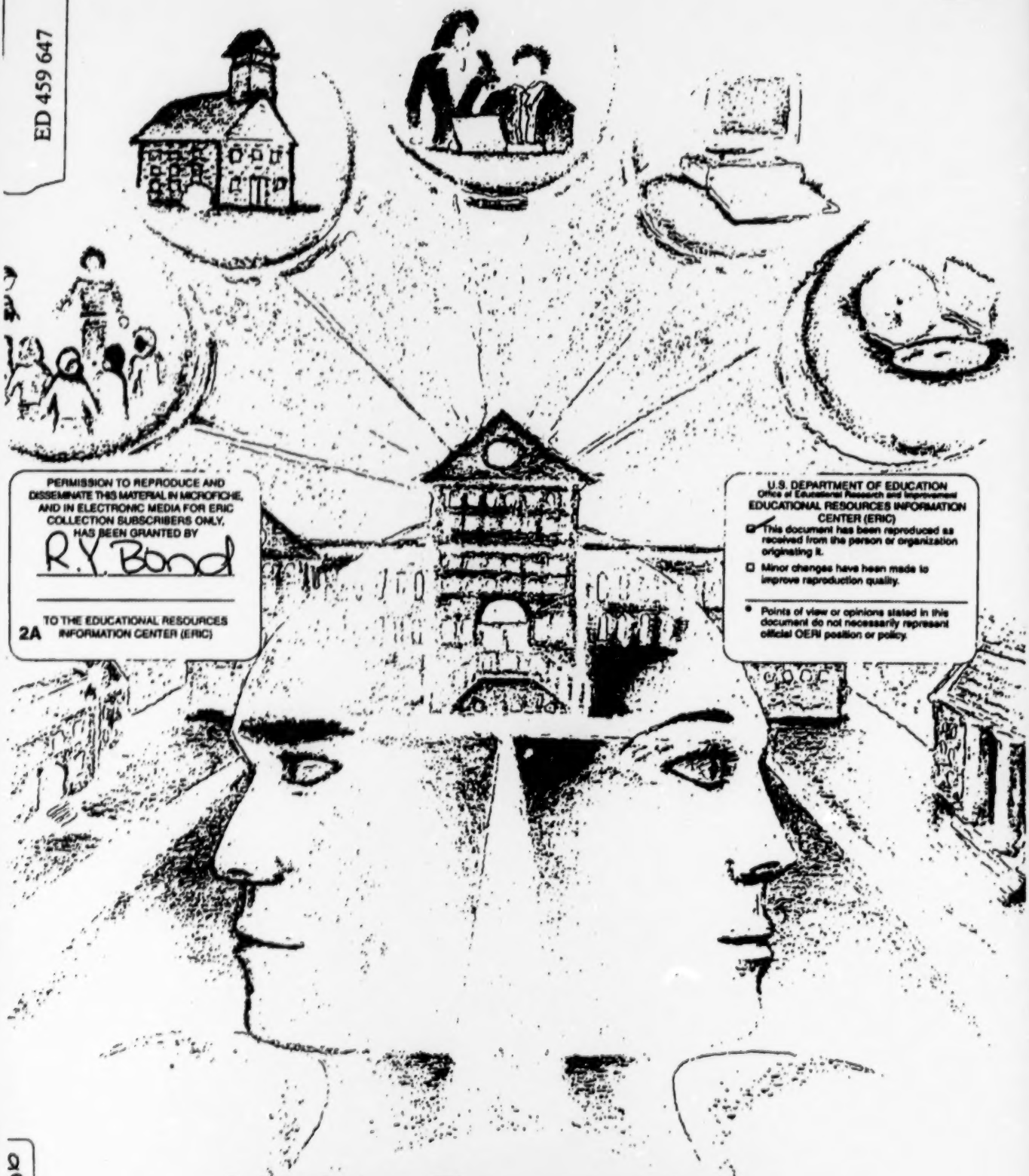
ABSTRACT

The essays in this collection were commissioned to launch an initiative focusing on state policies to respond to the challenges facing higher education in the new century. The initiative will engage governors and their key advisors in three priorities: increasing student access, learning, and degree attainment; building and sustaining seamless learning; and fostering economic development. The essays are: (1) "Privatization in Higher Education" (Arthur Levine); (2) "Economics, Demography and the Future of Higher Education Policy" (Anthony P. Carnevale and Richard A. Fry); (3) "Assessing the Quality of Student Learning: An Imperative for State Policy and Practice" (Richard H. Hersh and Roger Benjamin); (4) "Technology: Creating New Models in Higher Education" (Robert W. Mendenhall); and (5) "Creating High-Performance Postsecondary Education" (Donald F. Kettl). An appendix uses the case study of Oregon's higher education system to illustrate issues in the future of higher education. (SLD)

Reproductions supplied by EDRS are the best that can be made
from the original document.

ED 459 647

HE



PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE, AND IN ELECTRONIC MEDIA FOR ERIC COLLECTION SUBSCRIBERS ONLY, HAS BEEN GRANTED BY

R.Y. Bond

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

2A

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

Higher Expectations

Essays on the Future of Postsecondary Education

accountability

BEST COPY AVAILABLE

Higher Expectations

Essays on the Future of Postsecondary Education

These essays are part of the Postsecondary Education Initiative of the National Governors Association

Influencing the Future of Higher Education

NGA Center for BEST PRACTICES

Since their initial meeting in 1908 to discuss interstate water problems, the governors have worked through the National Governors Association to deal collectively with issues of public policy and governance. The association's ongoing mission is to support the work of the governors by providing a bipartisan forum to help shape and implement national policy and to solve state problems.

The members of the National Governors Association (NGA) are the governors of the 50 states, the territories of American Samoa, Guam, and the Virgin Islands, and the commonwealths of the Northern Mariana Islands and Puerto Rico. The association has a nine-member Executive Committee and three standing committees—on Economic Development and Commerce, Human Resources, and Natural Resources. Through NGA's committees, the governors examine and develop policy and address key state and national issues. Special task forces often are created to focus gubernatorial attention on federal legislation or on state-level issues. The association works closely with the Administration and Congress on state-federal policy issues through its offices in the Hall of the States in Washington, D.C. The association serves as a vehicle for sharing knowledge of innovative programs among the states and provides technical assistance and consultant services to governors on a wide range of management and policy issues.

The Center for Best Practices is a vehicle for sharing knowledge about innovative state activities, exploring the impact of federal initiatives on state government, and providing technical assistance to states. The center works in a number of policy fields, including agriculture and rural development, economic development, education, energy and environment, health, social services, technology, trade, transportation and workforce development.

Copyright 2001 by the National Governors Association, 444 North Capitol Street, Washington, D.C. 20001-1512. All rights reserved.

The responsibility for the accuracy of the analysis and for the judgments expressed lie with the author · this document does not constitute policy positions of the National Governors Association or individual governors.

For more information on other publications by the NGA Center for Best Practices, visit the center's web site at www.nga.org/center.

Table of Contents

Foreword 3

Privatization in Higher Education 5
Arthur Levine

Economics, Demography and the Future of Higher Education Policy 13
Anthony P. Carnevale and Richard A. Fry

Assessing the Quality of Student Learning: An Imperative for State Policy and Practice 27
Richard H. Hersh and Roger Benjamin

Technology: Creating New Models in Higher Education 37
Robert W. Mendenhall

Creating High-Performance Postsecondary Education 45
Donald F. Kettl

Foreword

NGA Center for BEST PRACTICES

Maryland Governor
Parris N. Glendening
Chairman
National Governors Association

Michigan Governor
John Engler
Vice Chairman
National Governors Association
Chairman
NGA Center
for Best Practices

Kentucky Governor
Paul E. Patton
Co-Lead Governor
Influencing the Future of Higher Education

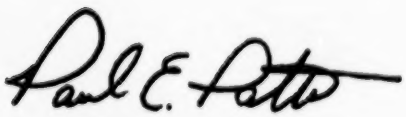
Pennsylvania Governor
Tom Ridge
Co-Lead Governor
Influencing the Future of Higher Education

The 21st century is upon us. Are we ready?

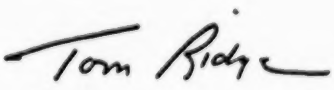
The driving force behind the 21st century economy is knowledge, and developing human capital is the best way to ensure prosperity. As the nation's most important public policymakers influencing education—prekindergarten through lifelong learning—governors are in a unique position to determine our educational infrastructure. Higher education, in particular, presents the governors with both unparalleled opportunities and unprecedented challenges. Recognizing the importance of postsecondary education and training to our nation's future, the National Governors Association Center for Best Practices (NGA) established a four-year project on the future of higher education. This initiative, *Influencing the Future of Higher Education*, focuses on identifying state policies that respond to the new century's challenges. *Influencing the Future of Higher Education* will engage governors and their key advisors around three priorities: 1) increasing student access, learning, and degree attainment; 2) building and sustaining seamless learning pathways; and 3) fostering economic development.

The enclosed essays are the first in a series commissioned to launch this initiative. The authors were chosen because of their expertise and their willingness to offer provocative comments on the future of higher education and public policy. The ideas discussed in these essays do not reflect policy positions of the National Governors Association or the opinions of any governors.

To ensure future prosperity and strengthen our public well-being, we must make higher education available and affordable to all. Our nation's progress will depend on the knowledge gained by our citizens, and their expectations are high. Join us in reinvigorating our strong system of postsecondary education and insuring that it is responsive to the needs of a changing society.



Paul E. Patton
Governor
Commonwealth of Kentucky



Tom Ridge
Governor
Commonwealth of Pennsylvania

Privatization in Higher Education

By
Arthur Levine
Teachers College, Columbia University

Summary

Despite the remarkable rate of change that marks our world today, six forces are undeniably spurring the spread of privatization in higher education: the rise of an information-based economy, changes in demographics, an increase in public scrutiny, the advent of new technologies, the convergence of knowledge-based organizations, and a decline in public trust in government. Governors can help state postsecondary education systems respond to these forces by helping define academic quality and student achievement, eliminating overlap and duplication, ensuring accountability, and more efficiently utilizing the capacity of private providers of postsecondary learning.

Background

The first force that is spurring the spread of privatization in higher education is the rise of an information-based economy. Now the sources of wealth come from knowledge and communication instead of natural resources and physical labor, which once characterized the United States as an industrial society. This is a global rather than a national economy. The New Economy puts a premium on intellectual capital and the people who produce it. This means that the demand for higher education is expanding dramatically. Education is needed throughout a lifetime, and the marketplace for that education is international. This growth makes education appealing to the private sector.

Second, the demographics of higher education have changed substantially. Students above age 25, women, working adults, and part-time attenders accounted for most of the enrollment growth in the 1980s and 1990s. Less than a fifth of today's college students meet the traditional stereotype of attending school full time (i.e., being 18 to 22 years of age and living on campus). For the new majority of students, higher education is not as central to their lives as it was for previous generations of students. Research shows they want a very different relationship with their college than students have historically had. They are looking for just four things: convenience, service, quality, and low cost. They are unwilling to pay for activities and services they do not use. What they are asking for is a stripped-down version of higher education minus the plethora of electives and student activities. They are prime candidates for adult-oriented, for-profit institutions, such as the University of Phoenix, which offer limited majors, few electives, and instruction by part-time faculty at convenient hours for students with great customer service in nearby locations in the suburbs and the business districts of our cities. They are also excellent candidates for for-profit or not-for-profit distance learning programs that are available in their homes or at their offices at any hour.

Changes in the demographics of traditional students will also affect the future of higher education. The number of 18-year-olds is growing at the rate of more than 1 percent per year. However, the growth is occurring disproportionately in the South and the West. In addition, an increasing proportion of high school graduates are now attending college—currently 65 percent, compared with 42 percent in 1970. The result is a tidal wave of new enrollments coming to higher education and varying dramatically by state. California, for instance, is bracing for a half-million new students in the coming decade. The state lacks the capacity on existing campuses to accommodate the increase in enrollment and must decide whether to build new campuses, create virtual campuses, or contract instruction to other organizations.

There is also a growing demand for higher education around the world, and the American university is thought of as perhaps the best source for that education. English is increasingly becoming the world's second language. Because the British Open University has been enormously successful—now offering instruction in more than 100 countries—the specter of global distance learning with markets of previously unimaginable sizes seems a distinct possibility and a real incentive for the private sector to enter the field.

Third, higher education is being subjected to greater criticism than in the past on issues varying from low productivity and high cost to the quality of leadership and the inadequacy of technology use. This is an invitation to a private sector that rightly or wrongly sees higher education as the next health care industry.

A fourth force is the advent of new technologies, the nation's love affair with the Internet, and the growth of enormous capital for investment. Higher education is an appealing investment for the private sector. Not only is it perceived as troubled and slow to change, but it also generates an enormous amount of cash and its market is increasing and growing global. "Customers," better known as students, make long-term purchases lasting two to four or even more years, thereby providing a very dependable cash flow and revenue stream. Enrollment in higher education is also counter-cyclical, which is very unusual in a business. College and university enrollments, translated as dollars, grow when the economy is bad because people are more likely to go to college when they cannot find work and to drop out at a greater rate when there are more jobs. On top of all of this, states and the federal government subsidize the higher education industry through their financial aid programs. It's a terrific package.

The results have been impressive. Venture capital firms with an interest in education are increasing substantially. Many major investment houses are developing higher education practices. Kaplan has an online, for-profit law school. Sylvan Learning Systems has a university in Europe. The accredited University of Phoenix, traded on NASDAQ, is the largest private university in the United States. Jones University is an entirely online, for-profit university. It recently received regional accreditation, the good housekeeping seal of approval. Unext, an online, for-profit university, is offering an M.B.A. with Stanford, Chicago, Columbia, Carnegie-Mellon, and the London School of Economics. To make things more complicated, New York University, while still functioning as a non-profit institution, just took its continuing education school for-profit.

The business community faces certain barriers to entering higher education, including the lack of an established reputation or brand name in higher education, the lack of content embedded in courses and intellectual capital embodied in a faculty, and the inability to certify or award credits

and degrees. Business leaders believe they will be able to surmount these barriers, owing to their financial resources, an entrepreneurial spirit unimpeded by a commitment to current practices, and their speed in entering the field. Their belief is that a brand name is fragile today, as Amazon.com proved with Barnes and Noble and Microsoft showed with Encyclopedia Britannica. Content and faculty members can be bought if universities fail to join with the business community in forming partnerships. Venture capitalists who visited Teacher's College last year estimated that the certification requirements of any state could be met or successfully challenged in one to three years.

The convergence of knowledge organizations is a fifth force. Television and cable networks, publishers, symphony orchestras, public libraries, universities, and museums, among others, are all starting to engage in the very same activities. Each of these organizations is in the content business, whether that content is packaged as books, television shows, concerts, exhibits, or courses. What each is now attempting to do is to expand the audience for its content and the number and kinds of venues for distributing that content. For example, the publishing company Harcourt Brace has formed a university, and the Public Broadcasting System (PBS) is now the largest provider of science teacher professional development in the nation.

Finally, public trust in government has declined in recent years. The result is declining confidence in the nonprofit sector and rising confidence in the for-profit sector.

Outlook for the Future

So given all these changes, what is going to happen to higher education? My complete and unvarnished speculation is that we are going to witness a revolution in the nation's colleges and universities. The following changes stand out.

There will be a greatly expanded and far more diverse set of higher education providers. Today there are 3,600 colleges and universities in the United States. For the most part, though they are public and private, the vast majority is nonprofit. In the years ahead, they will be joined by for-profit higher education and nonprofit knowledge organizations, such as museums and libraries that have entered the postsecondary market. There are already more than 1,000 corporate universities that provide instruction and staff development for their own companies. Some are far more advanced than traditional colleges in terms of pedagogy, curriculum design, and evaluation. Nonprofit and for-profit foreign universities will also join the fray. There will also be hybrids, such as the Western Governors University created by 17 states in collaboration with at least 14 business partners that include IBM, AT&T, and Microsoft. We will see competition between for-profits and not-for-profits as well as partnerships between and among sectors. For instance, in a recent conversation, an auto executive told me his car-making company was talking with a for-profit educator about turning now underutilized showrooms, the result of a rising level of Internet car sales, into for-profit community education centers.

The effect of these changes is likely to be substantial. Some colleges, particularly low-endowment, low-selectivity private schools, will face increasing pressure simply to remain open as competition grows. Institutional closures will rise. New brand names and a new hierarchy of quality in postsecondary institutions should also be an expected consequence. Is there any reason why a Microsoft credential should be less prestigious than one from Southeastern State University? The innovation leaders are far more likely to come from the new providers as well

as from those demonstrating the best customer service and the most commitment to assessing program performance. In this sense, traditional higher education may well become the follower rather than the pacesetter in this new postsecondary world.

There will be three basic types of colleges and universities. One type will be the traditional campus-based university. Let's call these "brick universities." Another type will be the new virtual university, such as Unext. These could be called "click universities." The third version will be a combination of the two, which could be called "brick and click universities." The most successful brick universities are likely to be residential colleges appealing to more traditionally aged students. The exclusively click universities will focus on nontraditional populations. Today's major universities are likely to try to become brick and click institutions that, if current findings on e-commerce are correct, should be both the most competitive and most attractive market in higher education. Although consumers appreciate the convenience, ease, and time-independent nature of shopping online, they also want the physical presence of the store for returning merchandise, getting expert advice, trying on and viewing products, and having interaction with salespeople and even other customers. Higher education's for-profit competitors already know this.

There will be a reduction in the number of physical campuses in the United States. In 1947 President Harry S Truman's Commission on Higher Education released a report citing five major obstacles to higher education. One was geography. There were simply not enough colleges. It became a matter of policy to create a college within easy commuting distance of every American. We have been remarkably successful and now have campuses in commuting range of more than 90 percent of all Americans. In a time when populations are increasing and distance is dying through the application of new technologies, states are likely to begin asking why we need all of this physical plant. California, for example, might ask why any state would need nine public research universities. Or New York might wonder if a state really needs 64 separate state universities. A reasonable conclusion is that the United States overbuilt campuses. Most of American higher education institutions are relatively alike, offering roughly the same programs and differing only by degree level and number of professional schools, so there is even less reason to create so many duplicate copies. For these reasons, the number of physical campuses is likely to be cut in the years ahead. The remaining institutions might well be encouraged to reduce the enormous degree of overlap in their programs, particularly in under-enrolled subject areas. In this sense, colleges and universities may well feel pressure to change from comprehensive department stores to more specialized boutiques.

There is likely to be an unbundling of the traditional functions of higher education. The functions of higher education are traditionally described as teaching, research, and service. Teaching is the only one of these functions that is universally profitable to colleges and universities. Research is sort of like NCAA football. It is only profitable to a very small number of schools. Everyone else loses money. Consequently, the new providers in higher education will only be interested in teaching. They will compete with colleges and universities only in the realm of instruction. Although this is a wise business decision, it raises a big issue for the nation. To the extent that colleges lose out to their new competitors, the offsetting funding for two activities of vital national interest is lost. The policy question that must be addressed is how do

we protect the research and service functions? An institution that engages only in research,and service is not financially viable, and it may not even be intellectually viable.

Faculty will be independent of colleges and universities. With the rise of virtual universities, the spread of technologies within higher education that enable institutions to reach dramatically larger audiences, and the entrance into higher education of a well-funded for-profit sector, the keys to the future will be the best faculty and the best content. Leading faculty will become the equivalent of stars. It is only a matter of time until agents represent them, the equivalent of an academic Michael Ovitz. With a worldwide market in the hundreds of millions, there will be talent agencies that specialize in representing faculty. Given the multitude of providers, it would be possible for an agent to bring a package to a faculty member that consists of a book deal with Random House, a weekly program on PBS, a consulting contract with Microsoft, commercial endorsements from one or more companies, and a distance-learning course with Unext for a fee of $2.5 million. When—not if—this occurs, it will be analogous to the fall of the studio system in Hollywood. Originally actors had contracts exclusively with a single film studio as professors do today with single universities. However, as a result of government action and the rise of talent agencies, actors gained prominence over studios. They work with particular studios on particular projects and often own their own production companies. The dominant force in Hollywood today is the actor or talent, not the studio. The same is likely to occur in academe. The professor's name will be more far important than the university's at which he or she is working at any given moment.

There will be worldwide campuses. For the most part, colleges and universities are associated with a particular nation. For click universities and click and brick universities, national boundaries have no meaning. The result will be the rise of global universities. Which institutions make the transition will depend on their speed of action and the quality of the products they produce. Global for-profits and schools, such as the British Open University, that already operate around the world have an edge if they can develop the cutting-edge pedagogy for the new Internet technologies that will shape the future.

Higher education will be individualized. Instruction will be available anytime or anyplace. Students will be able to receive their education on a campus, in the office, at home, in the car or on a train, in a hotel, at a conference, or on a vacation. That instruction will occur throughout a lifetime. It may be in multiyear blocks, months, days, or hours. The student will be able to choose the form of pedagogy most consistent with how he or she learns from numerous, different suppliers.

The focus of higher education will shift from teaching to learning. Today higher education focuses on process. In general, students study for defined periods, earn credits for each hour of study, and are awarded a degree upon earning a specified number of credits. With the individualization of education, the growing diversity of students, and the multiplication of providers, the commonality of process is very likely to be lost. With this change, the emphasis will necessarily shift from standardizing process to measuring outcomes. Accordingly, the emphasis will change from focusing on how students are taught to determining how much students have learned.

Degrees will wither in importance. Degrees today are the certification of time spent in a college. From college to college, there is little comparability of common quality or even of content in the studies constituting the same degree. In essence, we offer 3,600 different degrees at any given level of education in the United States. The degree signifies a period of successful college attendance, the class rank suggests the relative degree of success, and the name of the college indicates the quality of the degree.

With the change in emphasis from process to outcomes, degrees become far less meaningful or useful. It would be far more helpful to have a transcript of each student's competencies, what they know and can do. This might be a series of certificates or a statement of each skill or knowledge competency a student achieves. To record student achievements—throughout a lifetime in different settings using varied learning methods in perhaps different geographic areas—it will be necessary to establish a central education recording bureau and provide each person with a portable record of their educational achievements. This record might be called an "educational passport" or a "portfolio."

Educational dollars will follow students more than institutions. Again because of the multiplication of educational providers and the emphasis on outcomes, it is likely to make sense to government and private funders to invest their money in the student rather than institutions. Now funding of public universities by the state is a norm. States may choose to increase competition and reduce both funding demands and dependence on physical plant by redirecting the money to the consumer. This would raise large questions about the independence of higher education and the degree to which colleges and universities will be required to be market-driven and consumer-oriented in the way most for-profit schools are.

Issues for States

Such changes would raise very large policy questions for governors, including the following.

- How should states define and ensure quality in a world characterized by proliferating providers—nonprofit and for-profit, brick and click, national and international, degree and nondegree?

- How should this circus of providers and these forms of education be coordinated within and across states? Can eliminating overlap and duplication save revenues?

- Will higher education be profitable to the private sector beyond a small number of very visible institutions such as the University of Phoenix? If so, which sectors will be profitable: those preparing content, disseminating content, or supporting the activities of colleges and universities? Will competition or partnerships be more successful? Is all of this a permanent change or just a passing fad?

- How should states ensure accountability? What role should states play in mediating development? Should this occur principally by marketplace action, peer review such as accreditation, or government leadership? Should higher education be entirely driven by the marketplace?

- What should states invest in: physical or virtual campuses, for-profit or not-for-profit higher education, students, or institutions? Or, more realistically, what combination should states invest in? How should states take advantage of creating partnerships; outsourcing; developing the higher education equivalent of charter schools; and using the services of for-profit management firms, collegiate versions of school management companies such as Edison Schools?

- What role should states have in recording student achievements in a system in which education will occur throughout a lifetime from a multitude of providers?

Conclusion

We are living in a time when the literature describing the privatization of higher education is largely anecdotal, with duration of accuracy lasting approximately 15 minutes. New for-profit initiatives in higher education are starting and ending at a very rapid rate. This week's great success and revolutionary idea is old news and a failure next week. The field can alternately be described as a cornucopia of new efforts or a miasma of half-baked entrepreneurialism. It is probably both. The best and most current research on the subject is coming out of the venture firms and investment banks.

The facts are simple. We lack a common vocabulary to describe the initiatives that are being undertaken and a comprehensive map or even typology of what is going on. There are more questions than answers today. And, if venture capital firms are to be believed, there is much more money available than good ideas worth investing in. We are not even sure whether higher education is a profitable field for the private sector, though the preliminary evidence suggests the opportunities are better than in elementary and secondary education.

About the Author

Arthur Levine is president and professor of education at Teachers College, Columbia University. He received his bachelor's degree from Brandeis University and his Ph.D. from State University of New York at Buffalo. Prior to Teachers College, he chaired the higher education program and the Institute for Educational Management at the Harvard Graduate School of Education. Mr. Levine is the author of dozens of articles and reviews, including *When Hope and Fear Collide: A Portrait of Today's College Student* (with Jeanette S. Cureton), *Beating the Odds: How the Poor Get to College, Higher Learning in America, Shaping Higher Education's Future,* and *When Dreams and Heroes Died: A Portrait of Today's College Students.* An advocate of improving teacher quality and enhancing the use of technology in higher education, Mr. Levine's opinion editorials have appeared in *The New York Times, The Los Angeles Times, The Wall Street Journal,* and *The Chronicle of Higher Education.* A 1982 Guggenheim Fellowship winner, Mr. Levine's other awards include recognition by *Change* magazine as "One Of The Most Outstanding Leaders in the Academic Community."

Economics, Demography and the Future of Higher Education Policy

By
Anthony P. Carnevale
Richard A. Fry
Educational Testing Service

Summary

The growing income disparity between those with college degrees and those without college degrees has already turned us into a nation of college-haves and college-have-nots. In the next 15 years, 1 million to 2 million additional young adults will be seeking access to higher education, a large proportion of them from low-income and minority families. Governors are in a unique position to influence the nation's long-run economic competitiveness and social equity by helping minority and low-income youth gain access to postsecondary education, helping higher education institutions accommodate them, and finding ways to make the enterprise more affordable.

New Economy Demands

The driving force behind the 21st-century economy is knowledge, and developing human capital is the best way to fuel it. As the nation's most important public policymakers on the full spectrum of education—prekindergarten through college—governors are in a unique position to determine the course of human capital development for decades to come. Important issues stand out at each step along the education pipeline, but higher education, in particular, presents governors with both unparalleled opportunities and unprecedented challenges. The most urgent priorities are accommodating a huge influx of new students, increasing access to colleges and universities for all potential students, and finding the money to make postsecondary education affordable to all. Five states—California, Florida, Georgia, New York, and Texas—will be hardest hit, but all states will need to deal with these issues. Technology is an important tool in improving higher education, but it is not the short-term solution to lowering the costs of such education. One approach is performance-based reform.

Our ability to produce college-level knowledge will determine individual economic opportunity and our overall economic competitiveness. We already know from the evidence of the past few decades that people are not going anywhere in the new knowledge economy unless they go to college first. In 1959 only 20 percent of all prime-age jobs required at least some college; by 1997 the proportion was 56 percent. By 1998 more than 80 percent of managers and professionals had at least some college education, up from 59 percent 25 years earlier. Those in high-technology jobs followed a similar pattern, while the proportion of college-trained workers in education and health care started high (83 percent in 1973) and

climbed even higher (95 percent in 1998). The need for postsecondary education has increased substantially even for occupations not usually associated with book learning. The share of clerical workers with some college education has more than doubled, from 25 percent to 54 percent since 1973, while the share of skilled blue-collar workers with some college education has increased from 17 percent to 28 percent.[1]

This progression has been neither even nor universal, however. Disparities persist along economic and racial lines. Nearly 80 percent of high school graduates from high-income families went directly to college in 1997, while only half the high school graduates from low-income families did so.[2] The low-income population remains disproportionately minority, and this is also where the educational fault line lies. Among young adults ages 25 to 29 in 1999, white high school graduates were more than twice as likely to have earned a bachelor's degree than high school graduates who were African American or Hispanic.

The proportion of African American and Hispanic high school graduates enrolled in college has been rising but still lags behind. While 46 percent of college-age white high school graduates were enrolled in college in 1997, the proportions were 39 percent for African Americans and 36 percent for Hispanics.[3] These percentages are encouraging because they represent a narrowing of the education gap. Yet they do not tell the whole story, because a larger proportion of African Americans and Hispanics are not high school graduates and thus do not even make it into the calculation. In 1998, 90 percent of white 18- to 24-year-olds had graduated from high school, but only 81 percent of African Americans and a discouragingly low 63 percent of Hispanics had graduated from high school.[4]

Closing the racial and ethnic education gap not only would advance individual opportunity, but also would enhance the nation's wealth. For example, if we could equalize majority and minority college-level attainment, we would reduce the share of Hispanic families with officially determined "inadequate incomes" from 41 percent to 21 percent and that of African American families from 33 percent to 24 percent.[5] Moreover, the benefits would extend far beyond

---

[1] Anthony P. Carnevale, *Education = Success: Empowering Hispanic Youth and Adults* (Princeton, N.J.: Educational Testing Service, 1999).

[2] U.S. Department of Education, National Center for Education Statistics, *The Condition of Education 2000*, NCES 2000-062 (Washington, D.C.: U.S. Government Printing Office, 2000).

[3] Gladys M. Martinez and Jennifer C. Day, "School Enrollment—Social and Economic Characteristics of Students," *Current Population Survey*, P20-516 (Washington, D.C.: U.S. Government Printing Office, October 1997).

[4] Federal Interagency Forum on Child and Family Statistics, *America's Children: Key National Indicators of Well-Being* (Washington, D.C.: U.S. Government Printing Office, 2000).

[5] When all reported incomes are adjusted for family size, 41 percent of Hispanics, 33 percent of African Americans, and 14 percent of whites subsist below the minimum but adequate income level. However, if Hispanics and African Americans had the same education level and commensurate earnings as whites, the earnings of Hispanic men would increase by 71 percent, Hispanic women by 34 percent, African American men by 53 percent, and African American women by 15 percent. The resulting household income distribution would leave 21 percent of Hispanic families and 24 percent of African American families in households with incomes below the minimum but adequate level.

Even after equalizing educational attainment, African American and Hispanic families still have a much higher proportion than white families with minimum but adequate incomes or below—7 percent more for Hispanics and 10 percent more for African Americans. This remaining difference is principally

minority families. The increase in human capital would also add more than $230 billion to the nation's income, providing an additional $80 billion in new tax revenues.[6] Increased growth in state wealth would be $73 billion in California, $44 billion in Texas, and $22 billion in New York, and it would also spread broadly among most states (see Table 1).

College-level talent is a basic resource in growing the knowledge economy. Historically, increases in education have driven about 25 percent of the growth in the gross domestic product. With high school graduation rates moving toward 90 percent, future educational contributions to overall growth will have to come from increasing participation in prekindergarten development and increased years of postsecondary education. In addition, the rapid increase in the earnings of college graduates relative to the earnings of high school graduates through the mid-1990s is clear evidence of a shortage of college-educated workers and an oversupply of high school-educated workers. Finally, looking forward, economic projections show that among the 20 million new jobs to be created by 2008, 14 million will require at least some college education.[7]

Demography is destiny in postsecondary education. The good news is that demographic momentum ensures ever more students on campus between now and 2015, a substantial proportion of them minorities. We already know the population pool from which most college students will be drawn between now and 2015, and that pool is getting bigger every year. The youngest members of the traditional 18- to 24-year-old college-age population—those who will turn 18 years old in 2015—were already born in 1998. By 2015 the college-age population will have grown by 4.3 million to about 31 million young adults.[8] Immigration is causing the minority population to grow faster than the white population. The white college-age population will expand by only 4 percent and contribute only 800,000 to that 4.3-million increase, while college-age racial and ethnic minorities will increase by 40 percent and number 3.5 million (see Table 2). It is crucial that minorities have the same access to higher education as the traditional majority.

About two-thirds of this growth in college-age young people will be concentrated in California, Florida, Georgia, New York, and Texas (see Table 3). These five states could experience an increase of 2.9 million youth by 2015. Except for Georgia, these are also the states with the highest proportion of immigrants and the greatest burgeoning of the Hispanic population. Meanwhile, the potential student population is projected to decline in 13 states in the north central and northeast regions of the country. Most youth attend college in their home state; individual governors will have to plan for very different higher education scenarios.

---

because, compared with whites, both Hispanics and African Americans have larger families, a younger age and earnings profile, and more single female-parent households.

[6] In 1995, 12 million Hispanic workers earned, on average, $18,300 for a total of $220 billion. If their earnings per worker equaled that of white workers, with average earnings of $28,200, total Hispanics' earnings would have been $338 billion or $118 billion more. In 1995, 14 million African American workers earned, on average, $20,200, for a total of $287 billion. If their earnings equaled that of white workers, their total earnings would have risen to $400 billion, or $113 billion more.

[7] Anthony Carnevale and Donna Desrochers, *Help Wanted: Solid Skills Required. A Prospective Look at the U.S. Labor Market* (Princeton, N.J.: Educational Testing Service, in press).

[8] Paul R. Campbell, *Population Projections for States—by Age, Sex, Race, and Hispanic Origin: 1995 to 2025*, PPL-047 (Washington, D.C.: U.S. Government Printing Office, 1995).

Presently, about 37 percent of 18- to 24-year-olds is enrolled in college. If that proportion continues, the 4.3-million growth in this age group would translate to 1.6 million additional college students during the next 15 years, not taking into account nontraditional students above age 25. As many as 200,000 of those 1.6 million additional students could be African Americans and 400,000 could be Hispanics.

This expanded minority student presence would provide economic benefits to *all* students. Research shows that both minority and majority students on diverse campuses learn problem-solving, leadership, and other critical work skills better than students on campuses with more homogeneous student bodies. Similar benefits would accrue as students enter the workforce. There is increasing evidence that diverse work teams help institutions interact successfully with a more varied market at home and abroad; discourage "groupthink;" and encourage learning, creativity, and flexibility on the job. In today's global economy, these competencies are important competitive assets.

Celebrations are Premature. The large numbers of prospective minority college students may mask continued education gaps. Even with an additional 600,000 African Americans and Hispanics on campuses, Hispanic 18- to 24-year-olds are expected to be underrepresented in college by 8 percentage points and African Americans by 3 percentage points. If a smaller share of a larger pool of minority youth takes college admissions exams and enrolls in college, admission test scores and college performance ratings are likely to improve even as equal opportunity suffers.

Furthermore, preparing all students for college will require major investments to offer prekindergarten education and to reform elementary and secondary education. It may be tempting to meet some of those needs by diverting crucial public dollars from higher education. In addition, the overall surge in college-age youths will tax the ability of higher education institutions to meet the increased demand. Many institutions may turn to technology as an answer, but technology is expensive and is not likely to increase efficiency in time to reduce costs for these prospective students. All of these factors combine to encourage tuition increases just when the opposite—more affordable higher education—is what is needed to extend access.

Challenges to Meeting the New Economy's Demands

Governors must respond to the challenges of meeting increased demand and closing persistent educational gaps.

Social capital is the collateral necessary for human capital development. We need to invest more in social capital—supportive services—to get better returns on our human capital investments in higher education. Our success in attracting and keeping low-income and minority students will depend on our ability to invest in outreach and other forms of educational and social support necessary for academic success in college. This is particularly so for nontraditional students who account for a sizable proportion of the current minority and low-income student population. Usually older and often disadvantaged minorities, these nontraditional students have the least social capital of all. They are often isolated individuals, single parents, or members of struggling families, and they tend to be working in jobs with little hope of long-term

advancement. They have aged beyond the school and community support structure reserved for children and adolescents in American culture, and they are often unattached to other social and economic institutions that might provide direction and financial and psychological support. Reaching them will be our greatest challenge.

A significant barrier to postsecondary education among nontraditional students as well as low-income and minority high school graduates is that they are not aware of the many college opportunities open to them nor do they know how to apply for these benefits. Therefore, expanded counseling and recruitment efforts would likely have very large payoffs. For example, research conducted by the National Center for Education Statistics showed that Hispanic high school graduates who are qualified for college are less likely to attend college than similarly qualified white graduates.[9] However, the research showed no difference in postsecondary entry between white high school graduates and Hispanic graduates who take the necessary steps to get into a four-year college, such as taking the College Board test and applying to college.[10] This suggests that minority families may be losing out on a college education because they do not know the admission process. Informational and counseling remedies, which are not very expensive, could go a long way to bolster Hispanic participation in higher education.

Low-income and minority students depend heavily on student assistance, but aid has not kept pace with college costs. While 17 percent of white undergraduates currently receive federal need-based aid, 38 percent of African American and 36 percent of Hispanic undergraduates do so.[11] Yet the real value of need-based student aid has fallen far behind the increase in college costs and even farther behind the amounts necessary to close the gap between low-income families' needs and college costs. We know that low-income student enrollments are more sensitive to increases in college costs than middle- and upper-income enrollments. One study, for example, shows that for every $1,000 annual increase in the price tag at a community college, enrollments decline by 6 percent.[12]

Even if low-income and minority students have access to some form of postsecondary education, the overwhelming majority is shut out of the most selective four-year colleges. Among students at four-year colleges whose family income places them in the lowest quintile, only 8 percent attend the 120 most selective colleges. Only 34 percent of African American students and 25 percent of Hispanic students attend the most selective 1,000 four-year colleges. More than half of Hispanic students attend community colleges.[13]

Changes in student aid policy have hindered access to postsecondary education for low-income and minority students. Federal financial aid has shifted toward middle-income students since

---

[9] This was not the case for African American high school graduates.

[10] Lutz Berkner and Lisa Chavez, *Access to Postsecondary Education for the 1992 High School Graduates*, NCES 98-105 (Washington, D.C.: U.S. Government Printing Office, 1997).

[11] Lutz Berkner, *Student Financing of Undergraduate Education: 1995–96, With an Essay on Student Loans*, NCES 98-076 (Washington, D.C.: U. S. Government Printing Office, 1998).

[12] Thomas Kane, *Rising Public College Tuition and College Entry: How Well Do Public Subsidies Promote Access to College?*, NBER Working Paper 5164 (Cambridge, Mass.: National Bureau of Economic Research, 1995).

[13] Anthony P. Carnevale, *Education = Success: Empowering Hispanic Youth and Adults* (Princeton, N.J.: Educational Testing Service, 1999).

Congress adopted the Middle Income Student Assistance Act during President Jimmy Carter's tenure. Grants are more helpful to low-income students, while loans favor middle-income families. Yet loans have become the dominant form of aid, currently amounting to more than five times the value of grants. Meanwhile, the recent shift to tax-based aid in the form of credits and deductions also favors higher-income families that fill out the long form of income tax returns. At the same time, state and institutional aid programs have switched to merit-based aid that is targeted to middle-income families.

The need to increase access to higher education will run head-on into an inevitable budget crunch for all of education. As human capital emerges as the critical ingredient in economic growth in the knowledge economy, the pressure to spend money on all facets of education will become relentless. Governors will confront urgent demands for spending scarce public dollars on crucial priorities all along an expanded education pipeline—to make prekindergarten universal, to institute standards-based reform of elementary and secondary education, and to increase the capacity of postsecondary education institutions to accommodate all potential students.

None of these improvements will come cheap. Universal prekindergarten, for example, could cost as much as $40 billion. The additional 1.6 million postsecondary students anticipated by 2015 could cost higher education $19 billion. States, which currently pick up 35 percent of the postsecondary education bill, would have to come up with more than $6 billion at a time when they have been reducing their share of higher education spending.[14]

Ironically, in the competition for state dollars among the education sectors, governors may find it harder to justify expenditures for higher education than for prekindergarten and elementary and secondary education. Postsecondary education may become a victim of its own success and structure. If this happens, the real victims would be those who are thus denied access to higher education and the larger society that will be denied the intellectual and economic benefits of their contributions.

Higher education is viewed as more successful and less in need of help than other parts of the education system. "American higher education is much more productive than K-12 education—that is, it creates more learning for each dollar expended," Caroline Hoxby wrote in 1999.[15] But it is by no means perfect. Although spending for higher education has increased from $8,500 per student in 1971 to $10,500 per student today, the percentage of college youth attaining a bachelor's degree has fallen from 50 percent to 46 percent. Nonetheless, the implication that may be drawn is that because higher education is more productive, this sector is less in need of additional resources. Unlike elementary and secondary education, higher

[14] Michael S. McPherson and Morton Owen Shapiro, The Student Aid Game: Meeting Need and Rewarding Talent in American Higher Education (Princeton, N.J.: Princeton University Press, 1998), Table 3.2.

[15] Hoxby bases this observation on two pieces of evidence: 1) U.S. higher education is attractive to foreigners (the U.S. is the net importer of students); and 2) higher education's cost growth over the last 30 years is slower in real terms than growth in elementary and secondary education costs. See: Caroline Hoxby, "Where Should Federal Education Initiatives be Directed?," in *Financing College Tuition: Government Policies and Educational Priorities*, 1st ed., ed. Marvin Kosters (Washington, D.C.: The AEI Press, 1999), 53–75.

education is a market-based system responsive to market changes. Because it is less regulated than the elementary and secondary education sectors, higher education can adapt to cost realities more easily. The results of those adaptations are diffused through a decentralized higher education system and thus more difficult to discern. But that does not mean that society will not feel the impact of those adaptations.

Perhaps most important, higher education also has the ability to help pay for itself simply by raising tuition. However, the decision to raise college tuition and fees should not be taken lightly. It is true that college is still a very good deal, even though rising college costs has increasingly alarmed Americans. College degrees are still worth anywhere from eight to ten times their cost. That calculation may be a difficult one for median-income families, however. They have witnessed a doubling of college costs since the 1970s, while their own incomes have gone up by less than 25 percent.[16]

A decision to make colleges and universities try to pay for increasing costs by raising tuition and fees could prove counterproductive. Higher tuition will discourage enrollments, especially among low-income and minority students, the bulk of the potential new student population. Moreover, tight budgets will discourage the maintenance of quality improvements already in place and delay new investments in educational quality. Thus, the market response to this decision could be a classic case of market failure for higher education.

Reengineering and technology will not solve our short-term cost problems. If raising tuition and fees is not the answer, will technology come to the rescue? Technology cannot come to the rescue in time to serve the flood of new students who began arriving on college campuses in 1997. Ultimately, the reengineering of higher education into transparent institutional learning networks will make college cheaper, faster, and better for individual students, but it is less certain that efficiency improvements can increase faster than the overall demand for access. Nor is it likely that technology will save us by creating "virtual universities" for new students. Most people are not ready to get their education from a computer screen; they still want to get it in a college setting in which they interact with real professors and flesh-and-blood fellow students.

In general, our experience with technology in other service industries shows that technology adds value more than it reduces cost. It can reduce costs eventually, but the initial investments are expensive. And the most powerful long-term effects are not to reduce costs but to provide new kinds of added value in the form of quality, variety, customization, convenience, speed, and novelty.[17]

---

[16] The College Board, "Trends in College Pricing," (New York, N.Y.: The College Board, 1999).

[17] For information on the impacts of technology in general, see S. Zuboff, *In the Age of the Smart Machine: The Future of Work and Power* (New York, N.Y.: Basic Books, 1988); U.S. Congress, Office of Technology Assessment, *Technology and the American Economic Transition: Choices for the Future*, OTA-TET-238 (Washington, D.C.: U.S. Government Printing Office, 1988); and U.S. Congress, Office of Technology Assessment, *Making Things Better: Competing in Manufacturing*, TA-TET-443 (Washington, D.C.: U.S. Government Printing Office, 1990). For information on the role of information technology in higher education, see R. Ehrenberg, *Tuition Rising: Why College Costs So Much* (Cambridge, Mass.: Harvard University Press, 2000).

Performance-based reform can deliver higher education cheaper, faster and better. Governors are going to feel relentless pressure to find scarce resources to meet the growing economic need for postsecondary education. Rather than raising tuition or raising taxes, the most effective approach will be seeking performance-based reform. Why not award degrees according to outcome-based standards rather than time-based requirements? That is an idea whose time should be approaching. The introduction of performance standards and their alignment with assessments, curricula, and teacher preparation is already well underway in elementary and secondary education. Performance standards have grown steadily for vocationally oriented proprietary schools and community colleges. They are poised to spread to four-year colleges and graduate academic and professional programs.

There is an important caveat in the adoption of performance-based standards by institutions of higher education, however. Colleges and universities do more than simply prepare students for jobs. They also perform academic and cultural roles that are critical in a participatory political system and an individualistic culture. These missions must be factored into the higher education equation. At the same time, however, higher education cannot fulfill its cultural and academic missions without paying attention to its economic role. Ours is a society based on work.

Conclusion

Economic demands and the structure of education policymaking have combined to place the nation's governors in a unique position to influence the nation's long-run economic competitiveness and social equity. The key resource in the 21st century will be knowledge, and our ability to develop skilled, flexible workers who know how to quickly seize knowledge and adapt to shifting tastes and markets is the fundamental challenge to furthering our economic bounty.

Although human capital development holds the key to both competitiveness and economic opportunity, our education decisionmakers continue to be highly fragmented and to lack coordination. This is not simply a function of our federal system of government. Human capital development, broadly conceived, spans the lifetime. Throughout the spectrum of skill development, from prekindergarten to adult education and training, the rigors of the knowledge economy have upped the ante. The types of policy levers that can influence the nature and amount of resources devoted to human capital are increasingly varied, encompassing not simply legislated appropriations, but also tax expenditures, welfare reform endeavors, university administration and governance, and accreditation, licensing, and other forms of regulation. No single state legislative committee has authority over the wide expanse of human capital development policy levers.

The education and demographic forces driving education policy during the next 15 years will result in a highly competitive clamor for resources. All education providers and sectors will be seeking greater assistance from the state. Resources are always scarce, and the pressures will grow for the reforms necessary to match scarce resources to the growing economic need for postsecondary education. The nation's governors uniquely hold broad authority and oversight over the entire spectrum of education and training and skill development, and thus they are ideally positioned to understand the weaknesses throughout the entire endeavor and to determine where additional resources will have their greatest payoff.

In their zeal to improve the efficiency of the higher education system, the nation's governors cannot forget they are also the ultimate stewards of the equity of the system. Access to higher education has become the threshold for access to good jobs. The growing income disparity between those with college degrees and those without college degrees has already turned us into a nation of college-haves and college-have-nots. In the next 15 years, 1 million to 2 million additional young adults will be seeking access to higher education, a large proportion of them from low-income and minority families. Although African American and Hispanic youth have made great strides in educational attainment during the past century, these gains need be viewed in context. Relative to whites, the nation's minority youth continue to be far behind in the attainment of college degrees. The future of our economy depends on helping minority and low-income youth gain access to postsecondary education, helping the institutions accommodate them, and finding ways to make the whole enterprise affordable. Accomplishing that monumental feat is one task that lies before the public officials at the center of education policy—the nation's governors.

Table 1:

Gains in State Income from Equalizing Education Opportunity for Minorities (dollars in billions)

State	Gains
California	$73
Texas	$44
New York	$22
Florida	$17
Georgia	$12
New Jersey	$11
Illinois	$9
North Carolina	$8
Virginia	$7
Arizona	$6
Michigan	$5
Louisiana	$5
Alabama	$5
Maryland	$4
District of Columbia	$4
Mississippi	$4
South Carolina	$4
Ohio	$4
Pennsylvania	$3
Massachusetts	$3
Tennessee	$2
Washington	$2
Nevada	$2
Oklahoma	$2
New Mexico	$2
Hawaii	$2

State	Gains
Arkansas	$2
Missouri	$1
Oregon	$1
Connecticut	$1
Wisconsin	$1
Colorado	$1
Delaware	$1
Minnesota	$0
Alaska	$0
Utah	$0
Kansas	$0
Kentucky	$0
Idaho	$0
Nebraska	$0
Rhode Island	$0
Iowa	$0
Montana	$0
West Virginia	$0
South Dakota	$0
North Dakota	$0
Wyoming	$0
Indiana	$0
Maine	$0
New Hampshire	$0
Vermont	$0

Source: Educational Testing Service, Analysis of U.S. Current Population Survey Data.

Table 2:

Projected National Growth in the Traditional College-age Population, 2000–2015

			Non-Hispanic			
	Total	Hispanic	Asian/Pacific Islander	Black	Native American	White
2000	26,258,600	3,678,779	1,079,975	3,751,076	238,643	17,510,127
2015	30,515,711	5,755,446	1,769,529	4,430,572	273,876	18,286,288
Absolute Increase	4,257,111	2,076,667	689,554	679,496	35,233	776,161
Percent Increase	16.2	56.4	63.8	18.1	14.8	4.4
Share of Growth (%)		48.8	16.2	16.0	0.8	18.2

Source: Paul R. Campbell, *Population Projections for States by Age, Sex, Race, and Hispanic Origin: 1995 to 2025*, PPL-47 (Washington, D.C.: U.S. Government Printing Office, 1996).

Table 3:

Projected State Growth in the Traditional College-age Population, 2000–2015

State	2000	2015	Absolute Increase	Percent Increase
California	3,131,470	4,718,293	1,586,823	50.7
Texas	2,128,779	2,639,950	511,171	24.0
New York	1,629,083	1,958,481	329,398	20.2
Florida	1,253,105	1,537,390	284,285	22.7
Georgia	794,350	938,418	144,068	18.1
Massachusetts	548,967	681,404	132,437	24.1
Virginia	661,244	792,680	131,436	19.9
New Jersey	698,763	818,485	119,722	17.1
Illinois	1,169,289	1,287,962	118,673	10.1
North Carolina	724,072	839,033	114,961	15.9
Arizona	466,273	564,818	98,545	21.1
Maryland	467,530	564,931	97,401	20.8
Washington	557,446	637,519	80,073	14.4
Tennessee	545,289	598,780	53,491	9.8
Connecticut	275,133	327,511	52,378	19.0
Pennsylvania	1,066,220	1,116,862	50,642	4.7
South Carolina	367,713	416,822	49,109	13.4
Colorado	416,357	459,887	43,530	10.5
Alabama	432,573	474,222	41,649	9.6
Hawaii	120,951	156,012	35,061	29.0
New Mexico	186,851	220,384	33,533	17.9
Louisiana	473,148	502,218	29,070	6.1
District of Columbia	54,980	80,817	25,837	47.0
Rhode Island	85,792	108,156	22,364	26.1
Utah	296,943	317,042	20,099	6.8
Oklahoma	338,354	358,398	20,044	5.9
Nevada	168,764	187,216	18,452	10.9
Indiana	596,796	614,658	17,862	3.0
Missouri	537,867	555,426	17,559	3.3
Oregon	317,317	333,613	16,296	5.1
Alaska	72,208	87,809	15,601	21.6
Kansas	269,625	284,748	15,123	5.6
New Hampshire	109,400	122,551	13,151	12.0
Michigan	924,131	936,107	11,976	1.3
Delaware	71,873	80,660	8,787	12.2
Vermont	56,454	59,151	2,697	4.8
Wyoming	56,696	58,388	1,692	3.0
Mississippi	293,424	294,203	779	0.3
Nebraska	174,815	173,088	-1,727	-1.0
Maine	110,770	108,451	-2,319	-2.1
North Dakota	73,010	70,533	-2,477	-3.4

State	2000	2015	Absolute Increase	Percent Increase
Idaho	148,366	145,439	-2,927	-2.0
Arkansas	252,808	249,447	-3,361	-1.3
Ohio	1,086,624	1,083,205	-3,419	-0.3
South Dakota	82,286	75,320	-6,966	-8.5
Montana	92,945	84,416	-8,529	-9.2
Minnesota	485,566	476,195	-9,371	-1.9
Kentucky	394,017	384,071	-9,946	-2.5
Wisconsin	530,041	513,632	-16,409	-3.1
West Virginia	174,053	153,473	-20,580	-11.8
Iowa	288,069	267,436	-20,633	-7.2

Source: Paul R. Campbell, *Population Projections for States by Age, Sex, Race, and Hispanic Origin: 1995 to 2025*, PPL-47 (Washington, D.C.: U.S. Government Printing Office, 1996).

27

About the Authors

Anthony P. Carnevale is vice president for public leadership at Educational Testing Service (ETS). Prior to coming to ETS, Mr. Carnevale served as vice president and director of Human Resource Studies at the Committee for Economic Development (CED). He has served as chair of the National Commission for Employment Policy; as staff director for employment, education, training, and social service programs for the U.S. Senate Committee on the Budget; and as senior staff economist for the Government Operations Committee in the U.S. House of Representatives. Mr. Carnevale coauthored the principal affidavit in *Rodriguez v. San Antonio*, a U.S. Supreme Court action to remedy unequal tax burdens and education benefits. He has written numerous books and articles on competitiveness and human resources. His most recent books are *The American Mosaic: An In-depth Report on the Future of Diversity at Work* and *Tools and Activities for a Diverse Work Force*.

Richard A. Fry is a senior research scientist with Educational Testing Service (ETS) Office of Public Leadership. Before joining ETS, he worked as a labor economist for the U.S. Department of Labor and as a staff economist for the U.S. Federal Trade Commission. Mr. Fry is coauthor of ETS' *Crossing the Great Divide* study, contributor to *The Rising Tide: The Leading Minds of Business and Economics Chart a Course Toward Higher Growth and Prosperity*, and collaborator on an expert paper for the report of the National Commission on the Cost of Higher Education. His research has been published in numerous journals, including the *American Economic Review*, *Industrial Relations*, *Contemporary Economic Policy*, and *Population Research and Policy Review*. Mr. Fry received his Ph.D. from The University of Michigan, with specializations in labor economics and public finance, and his bachelor of arts in economics from Calvin College in Grand Rapids, Michigan.

Assessing the Quality of Student Learning: An Imperative for State Policy and Practice

By
Richard H. Hersh
Roger Benjamin
RAND/Council for Aid to Education

Summary

Governors are demanding better measures of quality in higher education. A value-added assessment of student learning is the missing but essential link needed to improve our understanding of the policy choices among access, productivity, and quality. Value-added learning assessment enables the continuous improvement of student learning, institutional efficacy, and state policy. Anything short of this systemic approach will leave academic leaders and governors without a basis for determining costs, benefits, or the effectiveness of their policies.

Erosion of Quality in American Undergraduate Education

Yogi Berra once said, "If you come to a fork in the road, take it." When it comes to education, though, many states seem stalled at that proverbial fork; one road reads "access," the other "quality."

For the past 30 years, "access" to higher education rightly has been the priority, the road most traveled. That laudable but mostly singular focus on access, however, has become too narrow. The excellence of the American education system has diminished in response to our culture's eroded values of intellectual achievement, and public schooling has been placed under intense scrutiny. Although federal, state, and corporate leaders are justifiably alarmed at the inadequate performance of America's K–12 public schools, they are increasingly concerned about the quality of higher education. Yogi, after all, is right—the new agenda must take the roads of both access *and* quality.

Consider the state of American higher education today. Even as tuition costs keep rising, there is evidence that the quality of postsecondary undergraduate education is deteriorating. One recent report indicates more than half of college graduates cannot calculate the change from $3.00 for a $1.95 sandwich and a cup of soup for 60 cents. Also, nearly one-third of college graduates never take a math course, 58 percent never study a foreign language, and almost 40 percent fail to take either an English or American literature course.[18] Currently, less than 50 percent of students who enter four-year colleges and universities graduate.

---

[18] *An American Imperative: Higher Expectations for Higher Education* (Racine, Wisc.: Wingspread Group, 1999), 5-6.

Corporate leaders worry about recruiting a new generation of qualified employees. They fear that the progress in restructuring industry and improving productivity, as well as the competence required to compete in the global market, will be lost if we cannot educate capable employees in the years ahead. More than that, there is recognition of the need to improve our civic society. For all these reasons, we need excellence in a seamless K–16 system of education and an assessment of quality to assure it. This has begun at the K–12 level and we need to start now to assess undergraduate education, which is a predominant state responsibility. Lifelong learning is increasingly the norm, so the assessment lessons learned from K–16 could eventually be extended to programs beyond formal degrees.

The notion of a seamless K–16 system is crucial because the strength of the postsecondary education system is key to improving public schools. Higher education increasingly provides the stepping-stone from school to work for the best-paying jobs. Seventy percent of high school graduates get some postsecondary education or training. High standards for college admissions and graduation should inform educators in the earlier grades of what is required. Yet the National Commission on the High School Senior Year found no such connection.[19]

Although nearly all states have standards for elementary and secondary students, the standards were typically established without the participation of the higher education sector. The result in most states is a gulf between the K–12 goals and the skills needed to begin college-level work.[20]

Furthermore, the K–12 crisis is, in large part, a function of an inability to produce, much less find, qualified teachers, the majority of who graduate from public colleges and universities. Finally, a more effective K–12 system increases the probability of a successful college experience.

Quality Assessment: The Missing Link

Governors as well as state and federal legislators face daunting issues and are demanding better measures of quality in higher education. Enrollment in higher education will increase by more than 15 percent nationally in the next 15 years and by more than 50 percent in several states. At the same time, student retention rates are unacceptably low, and many states are understandably concerned about the high dropout rates, especially among African American, Hispanic, and poor non-Hispanic white citizens. Moreover, costs continue to escalate in a manner that is ominously analogous to the rise in health care costs. State policymakers are justifiably asking what policies will enhance the effectiveness and productivity of their higher education systems?

It is impossible to properly assess the costs and benefits of improvements unless there is something concrete with which to examine their impact. The logical and only real candidate for accomplishing this task is to look at the effects of new policies and program improvements on student learning. Current assessment data, however, are not satisfactory. Although more than 15 states currently require some form of student achievement quality assurance in their public

[19]National Commission on the High School Senior Year, *The Lost Opportunity of Senior Year: Finding a Better Way* (Washington, D.C.: U.S. Department of Education, 2001).
[20]Education Trust, Inc., *Youth at the Crossroads: Facing High School and Beyond* (Washington, D.C.: Education Trust, Inc., 2000), 11.

higher education systems, appropriate assessment of student learning as the key ingredient is missing. This fact was underscored in the recent National Center for Public Policy and Higher Education report, *Measuring Up 2000: The State-By-State Report Card for Higher Education*, in which the authors searched for but could not find systematic data on student learning in any state.[21]

Student learning should be the central component of any effort to measure the quality of an institution or program, but most evaluations of quality are sorely lacking. Institutional accreditation—the predominant method of assuring quality—relies on a peer review methodology that does not examine comprehensive assessment of student learning, though it is fair to say that in the past several years the accrediting agencies have been in the forefront calling for such data. Such an assessment regime would strengthen and transform the accreditation process. Absent any systematic measure of quality by higher education, prospective students and their parents are relying on rating and ranking systems, such as those used by college guidebooks and *U.S. News & World Report*, as surrogate measures of quality.

Such ratings and rankings depend on "input" variables, including endowment dollars, SAT scores, and the number of faculty with doctoral degrees. These indicators may be important, but they do not measure the knowledge, skills, and abilities students develop in a particular college or university and thus do a great injustice to the quality, complexity, and diversity of higher education in the United States. Such assessment is the missing but essential link needed to improve our understanding of the policy choices among access, productivity, and quality.

Value Added: The Most Valid Assessment Measure

Virtually everyone who has thought carefully about the question of assessing quality in higher education agrees that "value added" is the only valid approach. Excellence and quality should be determined by the degree to which an institution develops the abilities of its students. By "value added" we mean the value that is added to students' capabilities and knowledge as a consequence of their education at a particular college or university. Measuring such value requires assessing what students know and can do as they begin college, assessing them again during college, and assessing them in the years after graduation when they experience the full benefit of their college education. Value added is thus the difference between the measures of students' attainments as they enter college and measures of their attainments when they complete college. Value added is the difference a college makes in their education.

Value-added assessment is appropriate for the variety of higher education institutional missions. Community colleges, which account for close to 40 percent of all undergraduate enrollment, as well as colleges and universities, clearly need to determine the effectiveness of their programs. We know, too, that increasingly students begin in one institution and finish in another and that the problems of appropriate program placement and transfer of credits within and/or across institutions can be ameliorated with better assessment data.

---

[21]National Center for Public Policy and Higher Education, *Measuring Up 2000: The State-by-State Report Card for Higher Education* (San Jose, Calif.: National Center for Public Policy and Higher Education, 2000).

Within an institution, value-added assessment can provide diagnostic feedback to students and faculty within single courses, programs, and majors and can catalyze improvement efforts. Finally, with the advent of distance education and its myriad educational promises, value-added assessment may have its greatest use in that the demonstration of competence, rather than the simple accretion of credit hours, will become the new academic currency.

Benefits of Value-Added Quality Assessment

Value-added assessment enables the continuous improvement of student learning, institutional efficacy, and state policy. Most important, timely and appropriate assessment provides feedback to students to improve their learning in much the same way that doctors' and coaches' assessments help patients and athletes improve. In this sense, assessment should be an inextricable part of teaching and learning.

An assessment system can be a catalyst for continuous institutional improvement. Some students do not learn because they have not been responsible; assessment will have obvious consequences for poor student effort. However, if assessment shows large numbers of students not doing as well as expected, there is a faculty and institutional responsibility to make changes in courses, programs, and teaching. Moreover, the development of effective measures of the value added to student performance would create a new metric for the performance of departments and instructors. This metric could be added to or replace research productivity as the criterion most often used to evaluate faculty performance. It is worth noting that only 100 of the more than 3,000 institutions account for 90 percent of federal research dollars.[22]

From a state perspective, value-added assessment data can provide the basis for continuous improvement of state policy intended to enhance higher education. Policies to provide smaller classes, technology for teaching, or more effective advising, for example, could be judged on the basis of their direct impact on students.

Value-added assessment of student learning can have enormous educational value in that it can help:

- faculty and their students make better sense of the teaching and learning in which they are mutually engaged;
- institutions of higher education measure the cumulative impact of their curricular programming;
- higher education, generally, by providing benchmark data for comparisons by sector (e.g., community colleges, liberal arts colleges, research universities, and online instruction) as well as creating the potential basis for an incentive system focused on student learning;
- public policy decisionmakers concerned with issues of access, quality, cost, accountability, and equity; and
- students make better decisions regarding the selection of appropriate colleges and universities, rather than relying on current incomplete rating and ranking systems.

[22]G. Guess and S. Carroll, *Patterns in Federal Support for R&D: 1993–1994*, L11-1598-IET (Santa Monica, Calif.: RAND, 1997).

As we hear the chant for "learning organizations" in the 21st century, as we elevate the need to educate for an information-driven society, and as we are asked to make wiser use of scarce resources, quality assessment has many benefits.

Barriers to Value-Added Assessment of Quality

The primary initiatives for comprehensive, coherent, and ongoing assessment of quality have come mostly from outside colleges and universities by state and local boards of education, corporations, state legislatures, governors, and market-oriented online educators. States have garnered the most headlines in this regard with their K–12 school reform priorities, explicit statewide standards, and so-called "high-stakes testing." Such assessment, however, is difficult. It requires achieving political and educational consensus about what is worth learning, developing valid and reliable assessment measures, ensuring high-quality professional development, constructing effective curricula, improving teacher education, providing appropriate reward and incentive systems, and offering the financial resources and time for the development and maintenance of a comprehensive, systemic assessment program. These are equally salient issues for higher education whose history and culture make it especially resistant to such assessment.

Higher education leaders offer several reasons to deflect a more rigorous assessment of teaching and student learning. First, academe has observed the problems states are having with assessment of K–12: the tendency to reduce testing to what is easily measured; inappropriate coaching or even cheating on the part of teachers and schools; narrowing the curriculum to just what is tested; and assessment designed for diagnostic purposes being confused with the politics and economics of holding individual schools accountable. These are serious issues and have reinforced the higher education community's usual questioning of the value of the entire assessment enterprise.

Second, the culture of higher education is based on several assumptions conflicting with the notion of assessment. Teaching is understood to be a very human, person-to-person enterprise. "We teach people, not produce things," is the refrain. Education is by nature, academics say, an inefficient enterprise that is not amenable to the measures employed by, for example, the corporate sector. The academic culture is one in which *systemic* assessment of undergraduate learning is neither practiced nor valued. Professors are trained to be scholars rather than teachers, with their scholarly disciplines and professional communities given a higher priority.

Third, it is believed that teaching cannot be properly evaluated, certainly not by the ubiquitous use of student evaluations of courses and professors that primarily measure affective, not cognitive, dimensions of learning. Moreover, it is argued that what is truly worth learning cannot be measured at all—certainly not during the college years—because the real effects of a college or university education are evident far beyond the undergraduate years.

Fourth, a prior history of intermittent but inappropriate federal and state administrative intrusion into curriculum raises a legitimate concern about invasion of "academic freedom." For example, states strongly rejected the attempted federal directive on accountability that was to require the creation of state postsecondary review entities in all 50 states. Recently, the New York Board of Regents mandated a core curriculum for the State University of New York.

Assessment beyond individual course grading, say professors, is just the first slide down the slippery slope of external intrusion.

Both the realistic demands of effective assessment and the culture of higher education pose formidable barriers to a value-added approach.

Implications of Value-Added Assessment for State Policy and Practice

Despite the barriers and legitimate concerns noted, assessing quality in a serious, comprehensive, ongoing, and systematic way can have profound effects on educational practice within and across institutions as well as on state policies and practices.

Value-added assessment should have as its goal continuous improvement of curricula, pedagogy, admissions, and retention. Whenever possible, state policies regarding the funding of higher education, incentive structures for innovation, differentiation of mission among the various levels of higher education, and assessment of the comparative advantages among state education institutions should be measured against whether or not they promote or inhibit teaching and learning.

The problem is that each educational policy issue, such as access, retention, cost of instruction, and quality—whether debated inside or outside the system—is too often treated in isolation. For this reason, governors do not receive the information they urgently need to address any of these issues. Policies to increase inexpensive access to higher education, for example, cannot be divorced from the issue of demonstrable student learning, as has been the case in the past. Access is a hollow promise if poor educational programming and teaching quality result in low retention.

State policies intended to ensure quality, productivity, and accountability must each be informed by a common metric; we suggest student learning best serves that purpose. This requires value-added assessment. Anything short of this systemic approach will leave academic leaders and governors without a basis for determining the costs, benefits, and effectiveness of their policies. At the same time, we emphasize that the culture of higher education is unique. It is simply not sufficient to import from industry the rhetoric of assessment and efficiency. The nature of teaching, learning, and scholarship, in the context of college and university cultures, requires an assessment system designed specifically for those environments. Moreover, states must understand that real investments are required to provide the time, energy, and resources necessary for such an endeavor.

A Strategy to Accomplish Value-Added Quality Measurement

If governors and other state policymakers attempt to use the gross, surrogate measures now mandated by several state legislatures and higher education governing boards, such as graduation rates, time to degree attainment, or percentages of 18- to 34-year-olds in postsecondary education, they will gloss over the fundamental causes of student and institutional success or failure. The key questions are clear. What institutional and system attributes support student success? What costs, even if they are higher than one would prefer, are justified because they enable professors to be better teachers and more students to succeed at higher levels of

learning? Which state incentives and rewards best result in the kinds of institutional priority setting, cost containment, and innovations that lead to increased student success? Assessment of student learning over time is the key variable in answering these questions.

Governors can play a strong leadership role by asking boards of trustees and higher education coordinating commissions to focus on the kind of assessment of student learning discussed here. Governors, along with their legislative colleagues, can also provide clear messages through the budget and appropriations processes.

Individual examples of powerful assessments of learning exist within and across higher education institutions in America. Yet only a few have constructed an institution-wide value-added approach, and there is only one project developing a nationwide approach to value-added assessment (see Appendix). States, alone or in consortia, can foster the development of the value-added approach in phases.

Phase I: Experimentation, Incentives and Rewards

In this phase, value-added measures need to be borrowed and/or developed and experimented with by faculty and administrators in a variety of colleges and universities within and across states. There is a wealth of material that is available but not widely known or shared. The goal in this phase is to establish an appreciation for a culture of evidence of learning within the institution. Faculty and staff must gain confidence in the system of value-added measures they develop so they can engage in continuous improvement of curriculum and pedagogy.

An example may be helpful. One highly regarded private university recently convinced its faculty of the usefulness of assessing the effectiveness of its required freshman-year core courses, only to find that students who took the courses in the fall fared no better than those who had yet to take them in the spring. Needless to say, such data surprised the faculty but also has led to significant questioning of the curriculum and pedagogy of that first-year program.

Given the barriers described above, the state may want to create a program to develop a value-added assessment system. Crucial to any such endeavor, however, is the need to provide appropriate incentives for the institutions and the faculty, with significant rewards to encourage experimentation and develop trust in the state's motives.

Phase II: Development and Diffusion

By experimenting with alternative strategies, state policymakers and higher education leaders eventually reach a confidence level in the system of measures developed within institutions. These can then be widely shared among institutions in a diffusion-of-best-practices phase. As the usefulness of the value-added measures is established, some institutions will want to publicly record their progress and individual institutional benchmarks become articulated. This enables a statewide conversation to begin about the standards and expectations appropriate to each institution's mission. Individual states may want to establish commissions or committees, under the aegis of their governors, legislative higher education committees, or higher education coordinating boards, to lead these studies, establish benchmarks, and report progress. The key is to develop a coalition of academic and state system partners.

Phase III: Comprehensive Assessment System Development and Implementation

In this phase, well-defined outcomes for general education and specific majors, performance measures of those outcomes, and a significant sample of students to be assessed are agreed to across the state system of higher education. Data are collected and utilized by each institution for internal educational program improvement.

Phase IV: Use of Value-Added Data to Inform State Policy

Once individual institutions are comfortable with the development and use of an assessment system for educational improvement purposes, the state, with value-added data, can craft policies that better inform questions of quality, cost, accountability, and productivity. Several productivity enhancements could be implemented, linked to an evaluation of the costs and benefits of the enhancements as they impact student learning, such as the following.

- One could provide incentives for faculty and define and evaluate faculty productivity in terms of student learning as well as research performance. This is particularly relevant to nonresearch colleges and universities where research incentives are not primary.
- One could begin to better evaluate mission differentiation among a state's colleges and universities on the basis of student learning as a variable in reallocating system resources.
- One could compare the cost and effectiveness of distance learning compared with similar content taught on campus.

At the risk of repetition, a final caution. Value-added assessment requires a radical cultural shift within higher education, a great deal of time, effort, cooperation, risk-taking, and funding. It takes more time, more skill, more trust at all levels, and more safeguards than are currently extant. It is, however, an investment with a potentially large payoff because, for the first time, many proposed changes would be evaluated against their positive or negative impact on student learning.

Conclusion

What matters in higher education? What differences do different roads taken by colleges and universities make? How can states break through the barriers to educational quality in an era of increasing demand for excellence in higher education and increasing distrust of government to provide what is now understood to be a social and economic necessity for all citizens? Can we answer these questions more cogently, wisely, and systematically than we do now by anecdote?

We believe the active leadership of governors is critical if this learning assessment imperative is to be translated into policy and practice. Governors lead by establishing priorities for state agencies, by influencing public opinion, and by participating in the legislative and budgeting processes. Governors help determine the terms of public policy debate, especially in education.

Having worked for the past 30 years in public and private higher education, we are not naïve in thinking that there is one simple answer to these questions. Yet there is ample evidence that assessing value added can be an important ingredient in improving not only public conversation about the meaning, purpose, and efficacy of higher education, but can also help improve curricula, pedagogy, and ultimately, student learning. It is for these reasons we assert that assessing the quality of student learning is an imperative for state policy and practice. We invite the nation's governors to lead in this endeavor.

Appendix

A Model for Higher Education Assessment of Quality: The RAND/CAE Value-Added Assessment Initiative

In fall 2000, the RAND Corporation's Council for Aid to Education (CAE) began a national Value-Added Assessment Initiative, a long-term project to assess the quality of undergraduate education in America. With beginning funding by a consortium of major foundations, the initiative's overall goal is to develop an assessment system that measures the impact of undergraduate education. The initiative involves the continuum of higher education, from community colleges to doctoral-degree-granting private and state colleges and universities. The objectives are to serve as a model and incentive for continuous improvement of higher education and to create measures of quality that all the major stakeholders—university administrators, faculty, students, parents, employers and policymakers—can use to evaluate the quality of academic programs nationwide.

The goals of this initiative are numerous and reflect multiple levels. They include:

- developing, testing, and evaluating value-added measures;
- adapting measures for use by institutions and systems of institutions;
- evaluating the valued added of a liberal arts education;
- evaluating the value added by private, residential liberal arts colleges compared
- with public undergraduate two- and four-year institutions, technical institutions, and online instruction;
- evaluating the value added to student learning by community colleges;
- evaluating value-added assessment to improve access and retention rates for underrepresented groups, particularly in sciences and math;
- setting and evaluating standards for admission to postsecondary institutions to provide information to students, parents, and teachers early in the K–12 system; and
- setting and evaluating exit standards—what is required for completion of a bachelor of arts or bachelor of science degree?

Colleges and universities will not be ranked, but such assessment data will provide institutions and college and university leaders with useful gauges to measure their progress in improving institutional quality and productivity.

About the Authors

Roger Benjamin is president of RAND's New York-based Council for Aid to Education (CAE). Prior to RAND, Dr. Benjamin was at various times provost, vice president for academic affairs, dean, and professor of political science at the University of Minnesota. He was also provost and senior vice chancellor for academic affairs at the University of Pittsburgh. Dr. Benjamin is the author or coauthor of numerous works on institutional design-related questions in higher education, including *The Redesign of Governance in Higher Education;* the chapter "The Implications of the Changed Environment for Governance" in *The Responsive University: Restructuring for High Performance;* and the chapter "The Coming Transformation of the American University" in *The Engaged University.* In the past four years he has led RAND research teams to assist higher education strategic planning efforts by the members of the California Education Roundtable, the Mayor's Task Force on the City University of New York, the Texas Higher Education Coordinating Board, and the Regents of the Nevada Higher Education and Community College System. He is currently co-directing CAE's initiative to measure quality in higher education.

Richard Hersh, president emeritus of Hobart and William Smith Colleges, is currently serving as senior fellow and director of the quality assessment initiative at RAND Corporation's Council for Aid to Education (CAE) in New York City. He also serves as senior advisor to the Christian A. Johnson Endeavor Foundation, New York City. Dr. Hersh served as president of Hobart and William Smith Colleges, vice president for Academic Affairs at Drake University, provost at the University of New Hampshire, vice president for research and dean of the graduate school at the University of Oregon, and director of the Center for Moral Development at Harvard University. As a professor of education, his scholarship and research has focused on effective schooling, teaching and learning, moral education, and educational organizational change. He has been a consultant to a variety of colleges and universities, boards of trustees, school districts, and corporations. He has authored *Intentions and Perceptions: A National Survey of Public Attitudes Towards Liberal Arts Education* and *The Culture of Neglect.*

Technology: Creating New Models in Higher Education

By
Robert W. Mendenhall
Western Governors University

Summary

Technology will greatly expand access to higher education and fundamentally change the models of education with which we are familiar. In particular, technology will enable education that is learner-centric, individualized, and interactive, making education far more relevant to the needs of individuals. It will allow for anytime, anyplace learning, which will be particularly attractive to working adults, and it will enable true lifelong learning in a formal sense. These new forms of educational delivery will require new ways to measure and credential learning. Governors, together with industry leaders, need to actively support the new learning paradigms for them to take root and flourish.

Potential for Technology in Postsecondary Education

Higher education can no longer be viewed as merely a campus-based event for individuals ages 18 to 25 before they enter the world of work. Technology is driving the demand for new forms of higher education because the pace of change in the workplace is requiring adults to be constantly retrained. Education, and associated credentials certifying learning, will increasingly be required on an ongoing basis as our workplace evolves with ever-increasing change. Technology will also provide us with alternate forms of postsecondary education delivery that will better meet the ongoing education needs of working adults.

Technology in postsecondary education affords the opportunity to create a learning environment that is learner-centric, individualized, and interactive.[23] Specifically, online education enables us for the first time to put knowledge and learning within reach of all those who have access, at the time and place where such knowledge is needed. Internet-based education offers the potential of thousands of classes on hundreds of subjects available anytime night or day, at any place, at the convenience of the student. Although postsecondary education has been both place-bound and time-bound, we now have the opportunity to truly have anytime, anyplace

[23] For purposes of this essay, the technology being discussed is online education, sometimes called "e-learning," that utilizes the Internet, or other private networks, and computers. I exclude from my definition of technology in education the many other technologies that have been used for many years, including all forms of instructional television. Although these technologies may have a place in helping students visualize real-world phenomena or, through distance delivery, in providing classes that might otherwise be unavailable, they are primarily linear, passive presentations of material in the tradition of classroom instruction. They represent distribution of current models of education, but they offer no new educational paradigm.

learning. Although the source of knowledge and learning has traditionally been the professor, knowledge and learning is now available over the Internet.

Teachers in traditional models perform as a "sage on the stage." What new paradigms help create is a "guide on the side" model. These two phrases describe succinctly the difference between teacher-centric classrooms and learner-centric classrooms. In the former, teachers are presumed to be the font of all wisdom and knowledge. Their job is to move that wisdom and knowledge from their own brains to the receiver brains of their students. Almost nothing is taken into account regarding the personal context, knowledge, or experience that each learner already brings to the learning situation. Students are seen primarily as empty vessels or passive receptacles waiting to be filled.

The availability of thousands of classes over the Internet enables learners to select their own learning choices from the offerings of many sites, order them the way they want, and pursue the outcomes that are important to them. This shift to learner-centric education has already begun, and it will take on added momentum as high-quality instructional content becomes available over the Internet. High-quality instructional modules will enable individuals to access the knowledge they need when it is needed, moving to "just-in-time" education rather than "just-in-case" education.

Contrasting Models: Traditional Education Versus Technology-Based Education

The United States has the finest postsecondary education system in the world, and the research and service contributions of our universities are an important component of our free and innovative society. There is significant evidence that research universities have positive economic effects in their communities. Campus-based universities and colleges also serve as an important "transition point" for young people graduating from high school, who are not yet prepared to enter the workforce and serve as fully participating citizens. The social aspects of the campus experience are important elements of learning at this stage of life, though they receive no credit or grade. The model of our existing universities and colleges is based on the idea that postsecondary education is an opportunity, generally for 18- to 25-year-olds, to dedicate several years to learning and preparation to become fully functioning adults ready to enter the world of work.

Technology will impact, to some degree, our traditional campuses and students. Universities will teach technology use and will have ongoing requirements to have the latest technology available. Professors will increasingly require students to use the Internet for research and supplemental information and sometimes for communication and collaboration. Some universities will develop a "brick-and-click" approach by offering a combination of classroom courses, online courses, and hybrid courses that combine online teaching with classroom discussion, as well as offering online courses through their continuing education departments to reach out to other learners. However, the use of technology does not change the fundamental distinctions between our traditional educational system and the new models of online learning. Those distinctions are in the role of the student, the role of faculty, and the role of the institution. Most institutions, especially educational institutions, have difficulty in reinventing roles, so it is likely that new institutions will take the leadership role in online learning. The new models of online education

serve different functions than our traditional universities. Fundamentally, online education is more applicable to lifelong learning than to education as an event, and it is more applicable to working adults than to students just out of high school.

Role of the Student

Online learning implies learner-centric education, where learners take responsibility to choose learning activities of most value and relevance to them. Traditional-aged students (18 to 25) are generally not able to take such responsibility. They do not yet have the experience in work and life to know which learning is most important. Moreover, many of these individuals benefit from the social interactions of a campus. In contrast, adult learners generally have full-time jobs, families, and a good idea of the additional education they need. They have little patience to sit through long lectures of information that may or may not be relevant. These students are able to take responsibility to define the learning that is important to them, and they will be demanding consumers of educational content. Many of these individuals simply cannot participate in formal education that is place or time specific. They require the anytime, anywhere learning afforded by online education.

Role of the Faculty

In traditional institutions, faculty members are perceived as the sources of knowledge, and their role is to communicate that knowledge to their students. With students who have little experience, there is arguably a common body of knowledge that needs to be taught and is relevant for most students. However, in the information age, the amount of knowledge and information is doubling every few years. It is no longer possible for professors to master more than a small slice of the current knowledge in their field. Research and researchers will continue to be vitally important to our society. Yet, with the increasing amount of content available over the Internet, the challenge for students is not access to information and knowledge. Understanding what is most important to know and where the best source of that knowledge lies are the challenges. Consequently, the role of faculty in online education shifts to mentoring—directing students to appropriate content; helping them learn how to learn and to find, sift, and judge the quality of information; and encouraging their progress.

Role of the Institution

Our universities and colleges are set up to define the learning that is required. They do this through required courses, prerequisites, and a specified number of credit hours. They also do this at the course level, with each professor deciding what he or she will teach in a given semester. Institutions certify learning by having professors assign grades to student performance and by counting credit hours completed toward a degree. Generally, an institution certifies only the learning that is done there, with some provision for the transfer of credits from elsewhere. In online learning, learning experiences may be from anywhere, not only from other universities and colleges but also from personal study or corporate training and work experience. The role of institutions will be to certify learning regardless of where it is done. This will change the institutional role from mandating classes and credit hours to developing measurements of knowledge and skills (i.e., from measuring activity to measuring outcomes).

Challenges for Effective Technology Use in Postsecondary Education

The potential of online learning cannot be realized without addressing some significant challenges.

Quality of Instruction

The quality of instruction is paramount. Many of the current online courses are of very poor quality, amounting to little more than professors putting their lecture notes online. To the extent that courses are simply text-based, electronic correspondence courses, they will be no more effective than those same courses in print form. The two most significant priorities in developing online courses governors can support are that they be modular and interactive. Modular content enables students to individualize their learning experience by skipping parts that they already know and focusing on modules that are relevant to their individual needs. New online content should be developed as learning objects, each addressing a particular objective, that can be linked to form modules and courses. New standards are being developed for learning objects to make them interchangeable. Effective online content is also highly interactive, utilizing the power of the computer to process student responses, provide specific feedback, and modify instructional paths based on student performance.

Sharing of Courses

Developing high-quality online courses is expensive. A typical development team would include, at a minimum, an instructional designer, a subject-matter expert, a graphic artist, a programmer, and an editor. Although faculty members are often the ones tasked with putting courses online, few if any of them have all of these skills. A few universities are organizing to support faculty development efforts, but this is not widespread, partly because of the high cost of doing so. The only way for institutions to afford the cost of high-quality course materials is to amortize the cost over many students by sharing courses. The current model is for every institution to develop its own set of online courses. However, from a national or state perspective, it makes no sense for an institution to be funding another English 101 course if there are already 10 good ones available from other institutions. There is no reason for 10 institutions to each develop a course in a particular subject, if they could pool their expertise, share the costs, and generate one really excellent course for all to use. Although the idea of sharing courses in many ways goes against the tradition of our universities as individual silos of learning where faculty design their own classes, there is a precedent in the use of nationally published textbooks.

Intellectual Property Rights

The concept of sharing online content, in the form of courses or simply individual learning objects, raises the issue of intellectual property rights. The issue is most often framed as to whether the faculty or the institution owns the course, but the issue is more complex. Developing high-quality online courses is beyond the capability of most faculties. It requires the skills of a team and the corresponding investment, and the challenge is to have adequate incentives for faculty, other team members, and the institution to participate in the development and wide distribution of online courses. The revenue-sharing model is more important than the ownership question, but both must be addressed to enable the maximum sharing of content. At the same time, if states are funding online course development at state universities and colleges,

they should be insisting that these courses be used across the state, and perhaps shared among states, rather than the same courses being developed at each state institution.

Completion Rates and Collaboration

The major challenges to distance education during the past 50 years have been low student completion rates and the lack of collaboration one would experience in a campus environment with both faculty and other students. However, Internet-based education can potentially address both of these issues. Collaboration over the Internet, using chat rooms, threaded discussion groups, message boards, and other tools, may be even richer than the interactions on campus. Increased collaboration leads to a sense of a learning community, and as a result, higher completion rates. The addition of faculty mentors to work with and encourage students has a further positive effect on completion rates. Nevertheless, these elements of e-learning are not present in many models and require thoughtful implementation.

New Roles for Students, Faculty, and Institutions

Technologically mediated learning means new roles for students, faculty, and institutions. These new learning models also produce new roles for state policies and new opportunities for governors to harness this powerful tool.

New Models for Assuring Quality and Credentialing Learning

Governors have the opportunity to frequently and compellingly convey the need for new models for assuring quality and credentialing learning. Postsecondary education has long been self-regulated, through regional accrediting bodies, and more recently, through various national accrediting groups. The U.S. Department of Education, corporations, government entities, and other universities accept accreditation as a certification of quality education. Accreditation is required for federal financial aid, for government and corporate tuition reimbursement, and generally to attract students to institutions of higher education. Traditionally, accreditation has looked at the quality of institutions and the qualifications of their people and processes. More frequently, quality assurance processes are beginning to assess the quality of learning at an institution. For example, the National Council for the Accreditation of Teacher Education is reforming its quality assurance process to include a demonstration by teacher candidates that they can connect theory to practice and be effective in the classroom (preschool to high school). Pass rates on a content knowledge test will be used in the accreditation decision.

Although institutional quality assurance is moving toward recognition of skills and knowledge obtained, technology-based education will enable learning to take place in many ways and many places outside of traditional higher education institutions. If learning is directed by the individual and not by an institution, and if that learning is unique to each individual and may be accomplished either through formal classes, by independent study, through work experiences, or in other ways, then the measuring and credentialing of that learning become critical. Perhaps the most important impact of the Internet on education is that it transfers authority from learning institutions to individuals. This trend, at least for adult learners, will lead to some surprising consequences.

- Individualized education will lead to individualized accreditation or certification of learning achieved. This trend is already well underway in the technology field, with industry

certifications such as Certified Novell Engineer (CNE) and Microsoft Certified Systems Engineer (MCSE) that already often have a market value equal to university bachelor's degrees. This trend will spread to other disciplines. As a result, the role of our education institutions must expand to measure and credential learning regardless of where that learning occurs, or new institutions will be formed to provide this function.

- There will be a greatly increased need for, and acceptance of, competency-based certifications rather than traditional grades on transcripts. Historically, universities have held the position that "the only learning that counts is the learning you do here." Learning is measured in credit hours, and the degree of learning is measured by attendance, classwork, assignments, and tests, which are created and assessed by instructors and reflected in grades. Although this system will continue to be used with traditional campus-based students, it is inappropriate for the new models of online learning. Where learning may have been done anywhere, and in a variety of ways, the measurement of learning will move to measuring outputs—what one knows and can do—rather than activity. Ultimately, there will be a preference for independently determined competency assessments *instead* of grades. This preference is already being expressed by employers and is demonstrated in the technology certifications developed by industry.

- In the end, if students can define, obtain, and validate their own learning, and employers find the validation reliable, then the meaning and value of a college degree is redefined. Although accredited universities and colleges largely control access to higher education today because they control the credentialing of learning, the higher education landscape of the future will be more open with different kinds of acceptable credentials and different forms of accreditation and validation of learning.

In addition to calling for new models of assuring quality and credentialing learning, governors can help articulate the need for swifter quality assurance processes. Regional accreditation is typically a five- to seven-year process, which is a huge barrier to entry for new participants in the education market. Even after accreditation, new degrees must be individually approved, which can take three to six months after the degree is developed. Although appropriate in past societies of limited change, the slow pace of traditional accreditation is not responsive to the New Economy requirements for education. For example, because of changes in technology, many programs of technology instruction have an effective life of only two to three years. Essentially, new programs in postsecondary education must circumvent traditional accreditation, as is the case with the burgeoning demand for technology certifications.

Implications for State (and Federal) Policy and Practice

Governors and industry leaders should support online education as an alternative to traditional campus-based education, particularly for working adults, but also for rural students who may be unable to attend a traditional college or university. Online education has the potential to make a significant difference in workforce development and economic competitiveness. To make this happen, governors can take the following actions.

- ***Ensure that Internet access is widely available.*** This includes ensuring access to computers and infrastructure (wires) among those who might otherwise not have such access. It also includes giving all individuals the basic knowledge to use the access provided. Knowledge of computers and the Internet is essential in the New Economy, but this knowledge is made exponentially more important because these tools will be key to all kinds of learning.

- ***Support financial aid eligibility rules to support study in qualified e-learning programs.*** To promote online learning, governors can advocate for changes to two federal policies. The first is the "12 hour" rule, which says a student must be enrolled for 12 credits to qualify for federal financial aid. The other is the "50 percent" rule, which says if more than half of an institution's instruction is conducted "at a distance" the institution is ineligible for federal financial aid. The U.S. Department of Education is currently involved in a demonstration program to explore changes to these and other rules to facilitate online learning, and states should actively support these changes. Governors can also put e-learning on an equal footing with more traditional classroom education by recommending changes to state financial aid programs and policies that promote online education.

- ***Recommend that state and industry tuition reimbursement provisions include e-learning.*** States should actively utilize e-learning for the ongoing training and development of state employees. States should also include and even encourage e-learning solutions in their requests for proposals for workforce development programs.

- ***Support the development and acceptance of alternative measures for assuring quality education.*** Historically, both government and industry have relied on traditional accreditation for assuring quality in education. As a result, only courses from accredited institutions are eligible for tuition reimbursement, accreditation is a requirement for federal financial aid, and accreditation is a requirement to bid on many government education and training jobs. Both government and industry need to measure quality by measuring the knowledge and skills (or competencies) acquired by their employees; such measurements will enable new and innovative programs, as well as technologies, to demonstrate their practical worth without a lengthy formal accreditation process. States need new processes to license alternative providers that can demonstrate the effectiveness of their programs, rather than leaving this task to traditional accrediting processes.

- ***Shift public postsecondary education funds from institutions to individuals.*** While continuing support for existing state universities and colleges, governors should carefully assess the need for more campus buildings in a learning environment that may increasingly be online. Over time, the funding of higher education should shift to financial support of individuals rather than institutions. Dollars will then flow to educational providers that best meet student needs, encouraging and increasing competition in higher education and empowering students to choose learning experiences that are most relevant to them.

About the Author

Robert W. Mendenhall is the president and CEO of Western Governors University (WGU) in Salt Lake City, Utah. WGU is a private, not-for-profit, virtual university offering competency-based degrees. It was founded and supported by 19 governors as well as 22 leading corporations and foundations, and it is the only competency-based university with accreditation status. WGU's mission is to expand access to higher education and promote competency-based degree programs. Mr. Mendenhall has more than 20 years of experience in the development, marketing and delivery of technology-based education. Prior to joining WGU, he had his own consulting business and previously was general manager of IBM's K–12 education division. From 1980 through 1991, he was a founder, president and CEO of Wicat Systems, Inc., a leader in providing computer-based curriculum, instructional management and testing to schools, and technology-based training to government and industry.

Creating High-Performance Postsecondary Education

By
Donald F. Kettl
University of Wisconsin—Madison

Summary

A focus on performance has become the watchword for American postsecondary education. With a more diverse and competitive postsecondary education market, growing student demand, and tight state budgets, traditional colleges and universities will have no choice but to reinvent themselves. Governors across the nation need to help colleges and universities focus on the principles of high-performance, reinvented organizations—a focus on results, an orientation toward customer service and customer choice, partnerships with communities, the use of privatization alternatives, and administrative reform.

All around the world, governments are reinventing their organizations. The one driving reality of 21st-century governance is the universal search of governments for strategies to stretch scarce tax dollars. Nowhere will citizens tolerate less public service. Nowhere do they want to pay more taxes. Governments thus find themselves under tremendous pressure to increase their productivity—to produce more service for less money.

The United States has not been among the most active countries in pursuing government reinvention. Some states have led the charge, but most have moved far more cautiously. Even in the most aggressively reinvented states, however, it is hard to escape the conclusion that higher education has lagged significantly behind the global reform movement.

Two big issues loom large for the traditional public institutions that manage postsecondary education. The market for education has become far more diverse and competitive. Surviving and thriving in this environment requires organizations that are light on their feet, ones that are able to adapt quickly to changing crosscurrents and to seize the new opportunities these challenges create. Moreover, as budgets get tighter and the twenty-first-century economy demands better-trained workers, the pressures to produce better education without spending more money will surely grow. Postsecondary education will have no choice but to reinvent itself.

Why has higher education not led the charge toward reinvention? Are there reinventing government approaches that might work well for higher education?

Reinventing Government

The global government reform movement—most commonly known as "reinventing government" in the United States—is not one idea but many ideas flying in loose formation.

One of the movement's greatest attractions is that the broad umbrella of reinvention covers a host of reforms. Reformers can claim they are "reinventing government" even if they are pursuing contradictory tactics.

Two very different strategies have driven the government reform movement around the world and in the United States. One comes from New Zealand and seeks to "make the managers manage" by creating strong and inescapable market pressures. The other comes from the United States and seeks to "let the managers manage" by sweeping away barriers to efficient and effective government. The New Zealand model is high on incentives, while the American model is high on flexibility. In theory, market-driven approaches can fit neatly with greater managerial flexibility. In practice, however, the New Zealand and American models often lead managers in contradictory directions. That creates a dual dilemma for applying reinventing government; public officials have claimed almost any change as reinvention, and public officials who have genuinely sought to follow reinvention strategies have often had great difficulty in determining which way to go.

The New Zealand Reform Strategy

The New Zealand government has launched what most observers around the world consider the most bold and innovative reform effort. It is notable for its single-minded focus on market forces, for its emphasis on results and outputs instead of budgets and inputs, and for its success in transforming the New Zealand economy. The government has used this approach both as an efficiency tool—to improve the education system—and as a way to define education's place in the policy world—to position it as a critical tool in economic development.

In the mid-1980s, the New Zealand government embraced market-driven reform principles. The reforms sought to separate policymaking from policy administration; to replace traditional authority-based government rules and structures with market-driven competition and incentives; and to give managers great flexibility in pursuing results. New Zealand reformers used the strategy not only to revolutionize government organizations, but also to spin off many services previously provided by public agencies.

New Zealand's efforts were not "anti" government as much as they were "pro" market. Whoever can do a job best, should do it. For the Kiwis, efficiency in achieving the desired outputs is the ultimate measure of accountability.

The American Reform Strategy

American reformers have taken a very different approach. Because the U.S. economy avoided the crises that plagued New Zealand's economy, the American reform strategy has not been as draconian. Because American society is more pluralistic and the nation's system of government is more complex, the United States has followed a much less laser-like strategy.

Like the New Zealand reforms, Americans have tended to believe the system can produce good public policy. Yet, while the New Zealanders believed managers needed to be given explicit goals and strong incentives, the American approach generally asserts managers know what needs to be done and simply need the flexibility to act. For example, almost none of the reinventing government reforms across the United States have asked the basic New Zealand

question: What should government be doing? The prime focus in the United States has been to do *better* what government does.

There is a further and more fundamental difference between the two approaches. New Zealand's strategy is to "make the managers manage" by defining clear goals, providing strong incentives, and holding managers accountable. Government ministers, for example, define policy objectives, hire senior managers under contract, design contracts to purchase specific outputs, reward the managers if they meet their output goals, and maintain the option of firing the managers if they do not.

In contrast, the U.S. approach has been to "let the managers manage." Reinvention has focused more on lowering the barriers to effective management and encouraging managers to be more responsive. Former Vice President Al Gore's federal reinventing government campaign, for example, pledged a government that "works better, costs less." That strategy, which has characterized most American efforts, has inevitably made American reinvention harder to define and assess. It has been a grab bag of tactics, including better customer service, greater reliance on information technology, more devolution and deregulation, and stronger partnerships with other organizations that help produce outcomes.

Taking Steps Toward Postsecondary Education Reform

American states have pursued many of these tactics in reforming postsecondary education. Virtually all major institutions implemented strategic plans during the last decade. State legislatures have increasingly insisted on performance targets and have cast a careful eye on graduation and time-to-graduation rates. They have worried about the quality of education and the skills graduates possess. A focus on performance has become the watchword for American postsecondary education.

Postsecondary education systems have often aggressively increased their productivity. In some states, private companies have taken over food service. Cafeterias in student unions sometimes resemble shopping-mall food courts. At the University of Arizona's student union, for example, students face a daunting array of food choices that could satisfy even the hungriest student and the fussiest eater. Contracting out for other support services, from the maintenance of the physical plant to the provision of janitorial services, has lagged behind privatization of food service, but outsourcing has crept onto the agenda in some institutions.

Many colleges and universities have worked especially hard to introduce a customer orientation to their student support services. Information technology has changed the old scenario of students standing in line for hours in a gymnasium to register for classes. The University of Wisconsin—Madison pioneered a class registration system that enables students to register for classes and change their schedules from any location using simple, touchtone-telephone menus. Colleges and universities have also worked hard to strengthen their advising services so students can more easily negotiate their way through graduation requirements and prepare better for their careers. The combination of streamlined registration and improved advising has been especially important in improving students' satisfaction with the system and in heightening the confidence of their parents, who often pay the bills, that they are getting their money's worth. These steps mark a major strategic shift, from a top-down, we-make-the-rules approach

that previously dominated colleges' and universities' relationship with their students to a bottom-up effort to meet their students' needs more effectively. This strategic shift is a hallmark of American-style reinvention. It has been essential in a system in which colleges and universities increasingly compete fiercely for high-quality students.

Some colleges and universities have been especially aggressive in procurement. In some states, the systems have driven hard bargains for telephone service and food-service contracts, and these contracts have often produced big savings.

Colleges and universities have also aggressively built partnerships with the broader community. The University of Pennsylvania's extraordinary investment in its surrounding neighborhood encouraged faculty members to live near campus again and helped transform a declining neighborhood. The University of North Carolina—Chapel Hill has exploited the growth in the Research Triangle to strengthen its connections with businesses in the state. University business parks around the nation, from Austin to Madison, have helped university entrepreneurs market their innovations and fuel high-technology economic growth. A few technical colleges have stopped to listen more carefully to the needs of employers, have developed new ways of training workers, and have built stronger links with high school and university systems. In some states, elements of the university system have begun to strengthen collaboration among campuses and between technical colleges and state universities.

Some colleges and universities have developed especially innovative partnerships to build political support and increase financial flexibility. The University of Wisconsin—Madison, for example, coupled private fundraising with increased state support. The underlying philosophy of the Madison Initiative was that many of the most important emerging problems lay at the intersection of several fields of study. The money not only paid for faculty salary increases, but also for new faculty positions explicitly dedicated to multidisciplinary work. The partnership could not have worked without state support to leverage private money or to use the new money to leverage, within the university, cooperative work among different departments.

For businesses, the partnerships produce better-trained workers with shorter learning curves. They produce more stable neighborhoods and better working conditions. For postsecondary education institutions, the partnerships seek to make their systems more effective and responsive as well as more attractive to students with a clearer link to the results they produce for the funds state governments invest. Not surprisingly, the principal strategies have been those of American-style reinvention: providing better service to student-customers; applying information technology to reduce costs and streamline key processes; giving students more flexibility and empowering their advisers to chart a clearer course; and building stronger links with partners in pursuing better results.

Despite these notable successes, however, postsecondary education often retains a stodgy image of inflexible, inefficient bureaucracy. State officials across the nation repeatedly complain about the system's insatiable demand for resources and the problem of ensuring accountability for how those resources are used. The postsecondary education system generally does not enjoy a reputation for good management, and state policymakers are looking for leverage to reinvent the system's operations. Even when state budgets were flush, it was impossible to

satisfy all the demands. When growth projections turn sluggish, postsecondary education is an inviting, inevitable target for cutbacks. In most states, the system's cost ranks with corrections, Medicaid, and transportation as among the biggest budget items.

The constant requests for more money, coupled with the often-strained relationships with state policymakers, frame a nagging question: How can we better reinvent postsecondary education to increase its accountability and reduce its costs? The real issue is why the United States cannot move more aggressively to the market-driven, output-based, cost-controlling strategies of New Zealand-style reinvention.

Explaining the Sluggish Pace of Change

The K–12 system has long been one of the most innovative areas of state policy. From school choice and site-based management to student graduation tests and teacher performance measures, states have aggressively reinvented local schools. The rapid pace of K–12 change has frustrated state officials as they have sought the same transformation for the postsecondary education system.

Output Definition

New Zealand-style reforms depend primarily on defining outputs—what results we want the system to produce. Education produces notoriously knotty problems in defining benchmarks. Postsecondary education, in particular, produces two outputs: increases in knowledge and the instruction of students. Both are hard to define precisely or measure well. The fruits of applied research, like clot-busting drugs and faster microcomputers, are obvious. Yet these fruits grow from the soil of basic research, carefully cultivated for years, decades, and, even millennia. It is virtually impossible to predict in advance which basic research will produce practical results. That has a dual effect. It makes it impossible to choose among basic research strategies, because it is impossible to know which ones might ultimately pay off. It also increases the autonomy of university researchers, who often make strong, impassioned arguments for the pursuit of knowledge for its own sake. That, in turn, helps fuel the judgment of some state policymakers that the system is unaccountable.

Judging the output of student instruction is likewise difficult. Technical colleges prepare students for specific careers. Students who have completed programs as veterinary technicians or computer programmers need to be able to do the job. For university education, however, both the output and the system's success in achieving it are difficult to define. That is especially the case for liberal arts majors. Educators can successfully make the case for the value of a liberal arts education. In a world where technology advances with breathtaking speed and in unpredictable directions, a wide foundation in the basics of knowledge is surely the best preparation for problems that no one has seen before. At the same time, lawmakers and parents who share in the cost of education voice a constant refrain: "What can students do with a major in English, philosophy, or the classics?" Some of the nation's most successful entrepreneurs come from precisely these backgrounds, but when resources are tight and the demand for accountability increases, these issues take on added importance.

Culture Deregulation

The organizational culture of the postsecondary education world puts sharp limits on performance-based approaches to management. A broad brush can paint the basic culture. Faculty members tend to focus on research and teaching. Trained to focus narrowly on the details of specific problems—the basic forces fueling stars or the intricacies of Renaissance art—they often have little patience with the rules that guide the system. They know no one but their colleagues know as much about their work as they do, so they expect autonomy in doing their job. They accept the university's rules as the price they must pay for flexibility in pursuing their work, but they readily accept the rules only from those they view as peers—other academics who have risen to administrative positions.

To keep the system working, colleges and universities have built substantial support staffs. There are laboratory assistants to help run experiments and librarians to maintain extensive research collections. There are computer technicians to support information technology and accountants to keep the books. If the basic faculty culture is to view the rules as a barely tolerable annoyance, the basic support staff culture is to use the rules to help manage the faculty. The view of the support staff toward the faculty ranges from bemusement (at a faculty member's difficulty in negotiating the forms and requirements) to paternalism (in protecting a faculty member from unintentionally violating the rules).

The faculty–support staff combination, however, tends to make the postsecondary education system especially difficult to change. The faculty relies on the support staff to keep the wheels running. The support staff focuses on the rules and procedures. The rules themselves can rise from guidelines to commandments because they become the currency of control. It is hard to deregulate the system because administrators worry about increasing the autonomy of faculty members and their departments that already operate with great independence. More autonomy could increase the risks of violating the rules, creating political embarrassments, and undermining financial support. That further fuels the tension between faculty members who complain about overbearing university administrators and their rules and university administrators who complain about faculty members who stumble into trouble. This culture makes it hard for colleges and universities to reinvent themselves. A culture founded in the autonomous, individual pursuit of knowledge is often one of the most rule-bound in state government.

Barriers in the Political System

The inevitably fuzzy nature of the system's outputs also makes it difficult to impose genuine market testing, as the New Zealand model would suggest. Because the results are hard to identify and measure, it is hard to determine what alternatives exist to produce the results better and cheaper. Even talking about the question can be difficult. Colleges and universities are filled with individuals who have 20 or more years of schooling, and in many cases, are the world's leading authorities in their subject areas. When challenged about the value of their work by policymakers, they often assert they know best what should be done and how best to do it. Given their training, that might well be true, but the nature of the conversation rarely builds confidence or enthusiasm among policymakers.

As part of their broader reinvention efforts, state policymakers have identified performance goals for many programs and have worked to hold managers more accountable for results. Because of the nature of postsecondary education, they have had far greater difficulty in defining outputs. In the 1990s, some state legislatures asked university systems to produce performance reports. Many state university systems on their own have identified performance measures, such as graduation and time-to-graduation rates, and have written performance reports. Legislators, however, have shown a much greater interest in *requesting* these reports than in *reading* them. Budget decisions drive legislators' attention. Linking university performance reports with budget requests is very difficult; it is very hard to say with any uncertainty that an "x" percent change in resources will produce a "y" percent change in a given performance indicator. As a result, in the last decade, state policymakers have focused more on *process* than on *performance*. They have worked to create new accountability mechanisms but, for the most part, they have not incorporated those mechanisms into policymaking.

University administrators often complain, moreover, that state policymakers fail to keep the deals they make. The typical approach has been a New Zealand-style flexibility-for-accountability strategy that gives the university more options in allocating state money in exchange for greater responsibility for results. State legislatures have insisted on more accountability, but university officials complain that legislatures have kept a tight hand on both operating and financial controls. The lawmakers counter that the new systems do not seem to have made universities any more accountable, and they have been unwilling to surrender their remaining control over process.

The difficulty of making the flexibility-for-accountability deal has proven one of the greatest obstacles in moving to genuine New Zealand-style reinvention. That, in turn, has greatly limited the postsecondary education system's ability to achieve the productivity gains everyone seeks.

Political Constraints

Some universities have been tempted to contract out more aggressively a wide variety of support services, especially in janitorial support, food service, and maintenance. In many states, however, public employee unions have effectively fought any expansion of outsourcing. The postsecondary education system, along with the corrections system, represents a treasure trove of jobs, and public employee groups have contested any effort to shrink the opportunities open to them. The federal government has already privatized many of these activities, but political struggles have reduced that option at the state level.

Reinventing Postsecondary Education

Postsecondary education has come a long way in the last decade. Most reforms have followed the American reinvention model of information technology application, better customer service, more flexibility, and more partnerships. Most of the elements of the market-driven New Zealand reforms have remained out of reach; these reforms require a clearer definition of goals than the American political system can typically supply. In part, this is because state policymakers have been very nervous about granting postsecondary schools even more autonomy, even in exchange for more accountability for results. In part, this is also because educational benchmarks are difficult to define.

Despite the improvements, significant potential for reform remains. As the sidebar on Oregon points out, some states have already made significant advances in bringing real innovation to their postsecondary education systems. Governors across the nation need to pursue such strategies, in concert with these principles of high-performance organizations.

A Focus on Results

The lesson of the most successful reforms is that change begins when policymakers and system managers focus on what they seek to achieve instead of what they spend. Enhanced performance measurement that focuses on outputs and outcomes is the critical first step toward a reinvented postsecondary education system.

An Orientation Toward Customer Service and Customer Choice

The driving incentive for focusing on results is serving the customer. For postsecondary education, this means centering the system on students, who need to prepare for the twenty-first-century economy; on parents and taxpayers, who pay the bills; and on policymakers, who shape the system's goals. It is difficult to restructure an organization to concentrate on customers instead of internal goals. It is even harder when there are multiple customers who might have conflicting objectives. Yet it is essential that postsecondary education do so if it is to meet the challenges the system faces. Enhancing choice for the system's students can provide powerful incentives to rise to these challenges.

Partnerships with Communities

One of the best ways to ensure postsecondary education institutions are responsive to their customers is to link them closely with their communities. That provides a constant reality check to the value added by the postsecondary education system as well as an early warning system for identifying emerging issues and problems.

The Use of Privatization Alternatives

Relying more on nongovernmental suppliers could produce significant savings for postsecondary education institutions. There are significant barriers to contracting out, but relying more on private suppliers could provide a market test of the cost of providing services and strong incentives for reducing costs while improving quality.

Administrative Reform

Postsecondary education cannot be reinvented in a vacuum. Public postsecondary education institutions are embedded deeply in a broad and diverse state political-economic system. If postsecondary education is to change, it must be part of a broader and more energetic effort to focus all of state government on results and customers. It is also true that if state government is to be reinvented, postsecondary education must be a central part of the strategy.

These principles should lead state policymakers to these reinvention strategies:

- promoting greater collaboration among campuses;
- strengthening collaboration between campuses and their communities and between campuses and their students' employers;
- enhancing student-centered initiatives, including stronger student advising services;

- boosting innovative educational strategies, including distance learning, that have the potential to increase instructional flexibility while reducing costs; and
- accelerating internal reinvention, including the streamlining of accounting and purchasing systems; the application of flexibility-driven initiatives, such as purchasing cards in place of traditional purchasing systems; and greater use of information technology to reduce paperwork.

These steps could significantly improve the quality of postsecondary education. They could also produce substantial productivity improvements. Yet they are unlikely to yield a quantum leap in cost savings—or to satisfy fully state officials seeking greater accountability. Those goals would require a fuller embrace of New Zealand-style principles. Reinvention raises tough questions in the postsecondary education arena.

- Because reinvention begins with a clear understanding of goals, can state governments set clear postsecondary education strategies? Can they decide what level of higher education they seek?

- Because reinvention requires careful assessment of results, can state officials determine what measures they would use to assess the extent to which postsecondary education institutions accomplish their goals? Are they willing to use these measures in making key policy and budget decisions?

- Because increasing accountability for postsecondary education has been as important as reducing its costs, are state governments willing to make a trust-but-verify deal with higher education? Can state governments give education institutions greater flexibility in exchange for tougher performance standards?

- Because reinvention must balance sanctions for poor performance with incentives for high performance, are state officials willing to grant greater budget flexibility in exchange for performance against benchmarks?

- Because postsecondary education institutions are nested within the broader state bureaucracy, will state officials reinvent the rest of state government that connects with the postsecondary education system? Will state officials take the political risks required to pursue some reinvention strategies, including privatization?

Conclusion

Reinventing postsecondary education could produce significant gains, but it entails significant political risks. Postsecondary education is one of the toughest reinvention targets. Its goals are hard to define and harder to measure. Postsecondary education systems tend to be embedded within broader state administrative systems that have not yet been reinvented. Most of all, reforming postsecondary education inevitably requires empowering a system that is already highly decentralized. This runs directly against the instincts of policymakers who often seek greater accountability through increased control.

Nevertheless, postsecondary education cannot afford to be left out of the reinvention game. The budgetary pressures on state governments are too large to exempt such a significant share of state budgets. The potential for improving the performance and results of postsecondary education is large. To achieve this promise, state policymakers and the postsecondary education system will both have to agree to assume more risk.

APPENDIX:

The Oregon Experience

Economic, technological, and demographic shifts are combining with a new role for government to drive powerful changes in public higher education governance and service delivery.

In the best cases, governing boards—in partnership with system and institutional executives, elected officials, and the business community—are enabling public colleges and universities to serve as "beta" test sites for new approaches to accountability and Information Age management.

Case in point: Oregon. The state is breaking new ground through its efforts to strengthen the way the Oregon University System (OUS) does business.

Oregon granted its higher education system a large measure of fiscal and operational autonomy in 1995, stopping short of making it a fully independent public corporation. It permitted the system to undertake purchasing, contracting, and personnel management outside of the state government's central apparatus. In return, the OUS committed to serving 2,000 more resident undergraduate students without additional general-fund support from the state—a goal the system met by fall 1997.

An independent panel of managers from the public and private sectors charged with evaluating these changes estimated that the system saved $5.8 million in the first two years—primarily through costs not incurred—in facilities contracting and procurement.

The review panel also found that delegated authority brought major process improvements. For example, enabling campuses to recruit directly for specific jobs in their local markets—rather than relying on overly broad statewide applicant pools—shortened the time required to fill positions and boosted the share of applicants interviewed. An added benefit: the state changed some purchasing practices for other agencies.

The review panel reported that several factors contributed to the successful delegation of administrative responsibilities from the state government to the OUS. Among them:

- There were shared commitments to change by Governor John Kitzhaber, the legislature, the Oregon State Board of Higher Education, and the OUS.
- Key personnel within the OUS had the knowledge and skills to assume many delegated authorities.
- The OUS was able to make the initial investments in new system office and campus staff to strengthen services.

- There were significant, near-term returns on those investments, as the volume of capital construction and improvement projects managed by the OUS provided a substantial foundation for efficiencies in contracting and purchasing.

More recently, the Oregon State Board of Higher Education has catalyzed changes in the system's budgeting and academic program approval processes. The goals: increased flexibility and collaboration across the system—and strengthened campus autonomy.

A new state budget model funds institutions principally on student enrollment, with a small performance-funding pool allocated on the basis of two broad indicators addressing college access for Oregon students and freshman persistence in college. Institutions now may retain all revenues that they raise—including tuition. Systemwide investment funds are designed to leverage collaboration across institutions. And in response to the work-force needs of Oregon's increasingly technology-driven economy, the board approved a fast-track program approval process to expedite new courses and degree programs.

In the late 1990s, a strong economy and a broad, shared commitment to boosting the skills of Oregonians led to a substantial infusion of new revenue. In return, OUS agreed to serve all eligible resident undergraduates while maintaining a tuition freeze.

As Oregon—like other states—navigate a new decade fraught with economic uncertainty, the state system is still boosting performance through an instructive mix of components: strong executive and board leadership; knowledgeable staff with good working relationships; investments in planning, training, and information systems; and sufficient audits that hold the system accountable.

Richard Novak, executive director of the Center for Public Higher Education Trusteeship and Governance at the Association of Governing Boards of Universities and Colleges, and Neal Johnson, the center's deputy executive director, wrote this case study.

About the Author

Donald F. Kettl is professor of public affairs and political science at the Robert M. La Follette School of Public Affairs at the University of Wisconsin–Madison. He is also nonresident senior fellow at Washington's Brookings Institution. He has previously taught at Columbia University, the University of Virginia, and Vanderbilt University. He has authored and contributed to numerous works, including *The Global Public Management Revolution: A Report on the Transformation of Governance, Reinventing Government: A Fifth-Year Report Card, Civil Service Reform: Building a Government that Works* and *Sharing Power: Public Governance and Private Markets*. Professor Kettl has consulted broadly for government organizations at all levels of government and he regularly contributes to discussion of public issues on radio and television. He is a regular columnist for *Governing* magazine, which is read by state and local government officials around the nation. He has served as chair of the Wisconsin Governor's Blue Ribbon Commission on Campaign Finance Reform and as chair of the Wisconsin Governor's Blue Ribbon Commission on State-Local Partnerships.

NGA Center for
BEST PRACTICES

National Governors Association Center for Best Practices
444 North Capitol Street, Suite 267, Washington, DC 20001
Phone: 202/624-5300 • Web site: www.nga.org